

A Revised List of Bryophytes Reported from Seram (Ceram) and Ambon Islands, the Moluccas, Based on Collections Made on the 1984–1986 Japan-Indonesia Collaborative Expeditions

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A total of 610 taxa of bryophytes (48 families, 154 genera, 364 species, and 3 varieties in mosses, 21 families, 59 genera, 226 species, 7 varieties and 1 forma in liverworts, and 1 family, 4 genera, and 9 species in hornworts) are reported from Ambon and Seram Islands based on collections made on the 1984–1986 Japan-Indonesian collaborative expeditions.

Keywords: Ambon, bryophytes, Ceram, flora, hepatic, hornworts, Moluccas, mosses, Seram

Seram (or Ceram) and the Ambon Islands are situated in the central Moluccas in eastern Malesia between two large islands, Sulawesi and New Guinea. Because of their location, it is expected that the bryophyte flora of these islands would show an intermediate feature between Malesian and Melanesian elements.

I have had a chance to conduct bryological surveys on both islands, mainly on Seram, as a member of the Japan-Indonesian collaborative expeditions from 1984 to 1986 (Fig. 1). Seram is composed mostly of limestone, especially in the central part, where the Murkele Ridge, which has several peaks exceeding 2500 m, with the highest being Gunung (Mt.) Binaiya at 3027 m, is located. In eastern and western Seram are low mountains not exceeding 1500 m (mostly lower than 500 m). The central part of the island now comprises Manusela National Park.

Before our research activities, the bryophyte flora of Seram and Ambon islands was known only from a few reports by Bartram (1939), Dozy & Molkenboer (1844, 1845–1854, 1854–1861, 1861–1870), Fleischer (1900–1922), Herzog (1916,

1919, 1921, 1926), Schiffner (1893, 1910), and Stephani (1898–1924). Additional papers on the bryophyte flora of Ambon and Seram, which are totally or partially based on our recent collections, as follows: Akiyama (1986, 1988, 1989, 1990, 1992, 1993, 1996, 1997a, b, 1999, 2006, 2007, 2009), Akiyama & Reese (1993), Akiyama & Suleiman (2001), Akiyama *et al.* (1991), Câmera (2009), Doei (1987a, b), Hattori (1986), Hasegawa (1986), Inoue (1986), Iwatsuki & Suzuki (1988), Kitagawa (1986), Klazenga (1999), Kruijer (2002), Mizutani (1986), Reese *et al.* (1991), Touw (1993, 2001a, b), Vitt (1995), Yamaguchi (1993), Watanabe & Akiyama (1991) and van Zanten (2006).

As a result, 48 families, 154 genera, 364 species, and 3 varieties of mosses, 21 families, 59 genera, 226 species, 7 varieties, and 1 forma of liverworts, and 1 family, 4 genera, and 9 species of hornworts are recognized among our collections from these two islands. Eight species of mosses, 11 species and one variety of hepatic, and one species of hornworts were described as new based on the collections (Table 1). Forty-

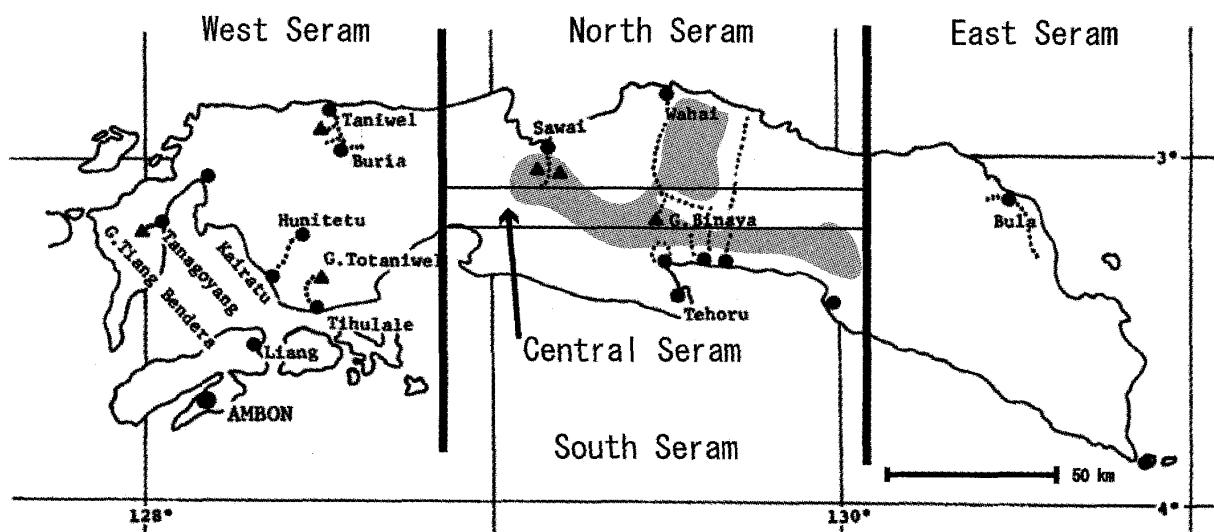


FIG. 1. Ambon and Seram Islands. Central part of the Seram Island is divided into four parts, North, Central, South, and the Manusela National Park (shaded).

three species in 33 genera of mosses and 15 species in eleven genera of hepatic, which were reported from the two islands (mostly from Ambon, where nearly all natural vegetation has been destroyed on Ambon because of intensive cultivation) in the older literature were not found during our expeditions.

TABLE 1. Taxa from Seram and Ambon islands described as new based on collections made on the 1984–1986 Japan-Indonesia collaborative expeditions.

Mosses

- Barbula seramense* H. Akiyama
- Calomnion ceramensis* Vitt
- Calyptrohaeta isophylla* H. Akiyama
- Holomitrium seramensis* H. Akiyama
- Leskeodon seramensis* H. Akiyama
- Powellia macromitrioides* H. Akiyama
- Syrrhopodon pulcher* Reese
- Taxithelium damanhurianum* P.S. Câmara

Liverworts

- Frullania akiyamae* S. Hatt.
- F. cordistipula* (Reinw. et al.) Dumort. var. *dentistipula* S. Hatt.
- F. gracilis* (Reinw. et al.) Dumort. var. *vittata* S. Hatt.
- F. hasskarliana* Lindenb. var. *gracilis* S. Hatt.
- F. hasskarliana* Lindenb. var. *parvidentata* S. Hatt.
- F. piptophylla* S. Hatt. var. *minor* S. Hatt.
- F. serrata* Gottsche var. *ceramensis* S. Hatt.
- F. suocellata* S. Hatt.
- Hattorirolejeunea akiyamae* Mizut.
- Lepidozia integrifolia* Doezi
- Plagiochila akiyamae* Inoue
- P. ceramica* Inoue

Hornwort

- Dendroceros seramensis* J. Haseg.

Bryophytes of Seram and Ambon

In the list below, families, genera, and species are arranged alphabetically. Taxa newly described based on our collections are preceded by an asterisk (*).

Abbreviations of localities are as follows: **A** = Ambon, **WS** = western Seram, **CS** = central Seram (600–800 m, central inland areas excluding Manusela National Park,), **SS** = southern Seram (below 500 m, southern inland areas excluding Manusela National Park), **NS** = northern Seram (0–600 m), **ES** = eastern Seram, **MNP** = Manusela National Park, central Seram (600–3000 m). For details on collecting sites in the islands, see figure 1 in this report and in Akiyama (1989, figures 2–4). Note that to determine the bryophyte flora of Manusela National Park, we tentatively divided central Seram into four subregions: CS, MNP, NS, and SS.

MUSCI

Amblystegiaceae

Platyhypnidium M. Fleisch.

- P. muelleri** (A. Jaeger) M. Fleisch. —Akiyama (1986: 62); Akiyama (1993: 229). MNP, SS.

Bartramiaceae

Bartramia Hedw.

- B. hallerana** Hedw. —Akiyama (2009). MNP.

Breutelia (Bruch & Schimp.) Schimp.

- B. arundinifolia** (Duby) M. Fleisch. —Akiyama (1996: 50); Akiyama (2009). MNP.

Leiomela (Mitt.) Broth.

- L. javanica** (Renauld & Cardot) Broth. —Akiyama (2009). MNP.

Philonotis Brid.

- P. calomicta** Broth. —Akiyama (2009). A, SS, WS.

- P. hastata** (Duby) Wijk & Margad. —Akiyama (2009). CS, SS, WS.

- P. roylei** (Hook.f.) Mitt. —Akiyama (2009). WS.

- P. secunda** (Dozy & Molk.) Bosch & Sande Lac. —Akiyama (2009). CS, MNP.

- P. turneriana** (Schwägr.) Mitt. —Akiyama (2009). MNP, SS, WS.

Brachytheciaceae

Palamocladium Müll. Hal.

- P. nilgheriense** (Mont.) Müll. Hal. = *P. leskeoides*, fide Hofmann (1997).

- P. leskeoides** (Hook.) E. Britton —Akiyama (1993: 229, as *P. nilgheriense*); Akiyama (2009). MNP.

Bryaceae

Anomobryum Schimp.

- A. julaceum** (Schrad. ex P. Gaertn. *et al.*) Schimp. —Akiyama (2009). MNP.

Brachymenium Schwägr.

- B. exile** (Dozy & Molk.) Bosch & Sande Lac. —Akiyama (2009). SS.

- B. gracile** E.B. Bartram —Akiyama (2009). MNP.

- B. indicum** (Dozy & Molk.) Bosch & Sande Lac. —Akiyama (2009). SS.

- B. nepalense** Hook. —Akiyama (2009). MNP.

- B. cf. nepalense** Hook. —Akiyama (2009). MNP.

Bryum Hedw.

- B. apiculatum** Schwägr. —Akiyama (2009). MNP, SS, WS.

- B. argenteum** Hedw. —Akiyama (2009). MNP.

- B. billardieri** Schwägr. —Akiyama (2009). MNP.

- B. cf. bicolor** —Akiyama (2009). MNP.

- B. clavatum** (Schimp.) Müll. Hal. —Akiyama (2009). SS.

- B. leucophyllum** Dozy & Molk. —Akiyama (2009). MNP.

- B. perdecurrens** E.B. Bartram —Akiyama (2009). MNP.

- B. tuberosum** Mohamed & Damanhuri —Akiyama (2009). MNP.

Leptodontium (Müll. Hal.) Hampe ex Lindb.

- L. flexifolium** (With.) Hampe —Akiyama (2009). MNP.

Orthodontium Schwägr.

- O. inflatum** Dozy & Molk. —Akiyama

(2009). MNP, WS.

Rhodobryum (Schimp.) Limpr.

R. aubertii (Schwägr.) Thér. —Akiyama (2009). CS, NS, SS, WS.

R. giganteum (Schwägr.) Paris —Akiyama (2009). MNP.

Buxbaumiaceae

Buxbaumia Hedw.

B. javanica Müll. Hal. —Akiyama (1986: 39); Akiyama (1989: 151). MNP.

Calomniaceae

Calomnion Hook.f. & Wils.

C. ceramense Vitt —Akiyama (1988: 12, as *C. complanatum*); Akiyama (1990: 401, as *C. cf. complanatum*); Vitt (1995: 339); Akiyama (2009). MNP.

Type: Manusela National Park, Tehoru, Nihehata to summit of Gunung Hoale Besar, 1560 m alt., *Akiyama C-16703* (holotype in KYO; isotypes in FH, NY).

C. complanatum (Hook.f. & Wils.) Lindb. = misidentification of *C. ceramense*, fide Vitt (1995: 339).

C. cf. complanatum (Hook.f. & Wils.) Lindb. = misidentification of *C. ceramense*, fide Vitt (1995: 339) and Akiyama (2009).

Calymperaceae

Arthrocormus Dozy & Molk.

A. shimperi (Dozy & Molk.) Dozy & Molk. —Yamaguchi (1993b: 301). CS, ES, NS, SS, WS.

Calymperes Sw. ex F. Weber

C. aeruginosum Hampe ex Sande Lac. —Akiyama (1986: 44); Akiyama & Reese (1993: 200). CS, MNP, NS, SS, WS.

C. boulayi Besch. —Akiyama & Reese (1993: 201). ES, SS, WS.

C. couguiense Besch. —Akiyama & Reese (1993: 201). SS.

C. erosum Müll. Hal. —Akiyama & Reese (1993: 202). A, ES, WS.

C. graeffeanum Müll. Hal. —Akiyama & Reese (1993: 202). ES, NS, SS, WS.

C. lonchophyllum Schwägr. —Akiyama

(1986: 44, as *C. aff. serratum*); Akiyama & Reese (1993: 202). A, ES, NS, SS, WS.

C. longifolium Mitt. = misidentification of *Syrrhopodon loreus* (Calymperaceae), fide Akiyama & Reese (1993: 209).

C. palisotii Schwägr. subsp. **moluccense** (Schwägr.) M. Menzel —Akiyama & Reese (1993: 203). NS, SS, WS.

C. porrectum Mitt. —Akiyama & Reese (1993: 203). A, NS, SS, WS.

C. serratum A. Braun ex Müll. Hal. —Akiyama (1986: 44); Akiyama & Reese (1993: 204). NS, MNP, SS, WS.

C. aff. serratum = misidentification of *C. lonchophyllum*, fide Akiyama & Reese (1993: 202).

C. strictifolium (Mitt.) G. Roth —Akiyama (1986: 44); Akiyama & Reese (1993: 205). A, NS, CS, SS.

C. subintegrum Broth. —Akiyama & Reese (1993: 205). A, ES.

C. taitense (Sull.) Mitt. —Akiyama & Reese (1993: 205). A, CS, ES, MNP, NS, SS, WS.

C. trenerum Müll. Hal. —Akiyama & Reese (1993: 206). SS, WS.

Exodictyon Cardot

E. incrassatum (Mitt.) Cardot ex Paris —Yamaguchi (1993b: 301). SS.

Exostratum L.T. Ellis

E. asperum (Mitt.) L.T. Ellis —Yamaguchi (1993b: 301). NS.

E. blumei (Nees ex Hampe) L.T. Ellis —Yamaguchi (1993b: 302). MNP, NS, SS.

E. sullivantii (Dozy & Molk.) L.T. Ellis —Yamaguchi (1993b: 302). MNP.

Leucophanes Brid.

L. albescens Müll. Hal. = *L. glaucum*, fide Salazar Allen (1993).

L. angustifolium Renauld & Cardot —Akiyama (1986: 43, as *L. massartii*); Yamaguchi (1993b: 302). CS, ES, MNP, NS, SS, WS.

L. candidum (Schwägr.) Lindb. —Akiyama (1986: 43); Yamaguchi (1993b: 302). CS, MNP, NS, SS, WS.

L. glaucum (Schwägr.) Mitt. —Akiyama (1986: 43, as *L. albescens*); Yamaguchi

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(1993b: 302). A, ES, NS, SS, WS.

L. massartii Renauld & Cardot = *L. angustifolium*, fide Salazar Allen (1993).**L. octoblepharoides** Brid. —Akiyama (1986: 43); Yamaguchi (1993b: 302). A, ES, MNP, NS, SS, WS.**Mitthyridium** Robins.**M. constrictum** (Sull.) Robinson —Akiyama (1986: 45); Akiyama & Reese (1993: 213). A, MNP, NS, SS, WS.**M. crassum** (Hook. & Grev.) H. Robins. —Akiyama (1986: 45, as *M. cf. crassum*); Akiyama & Reese (1993: 213). WS.*M. cf. crassum* (Hook. & Grev.) H. Robins. = misidentification of *M. crassum*, fide Akiyama & Reese (1993: 213).**M. fasciculatum** (Hook. & Grev.) H. Robins. —Akiyama (1986: 45, as *M. cf. fasciculatum*); Akiyama & Reese (1993: 213). A, ES, MNP, NS, SS, WS.*M. cf. fasciculatum* (Hook. & Grev.) H. Robins. = misidentification of *M. fasciculatum*, fide Akiyama & Reese (1993: 213).**M. leucoloma** (Müll. Hal.) H. Robins. —Akiyama & Reese (1993: 214). ES.*M. louisiadum* (Broth.) H.K. Nowak = *M. repens*, fide Reese (1986).**M. papuanum** (Broth.) H. Robins. —Akiyama & Reese (1993: 214). NS.**M. perundulatum** (Broth.) H. Robins. —Akiyama & Reese (1993: 215). NS, WS.**M. repens** (Harv.) H. Robins. —Akiyama (1986: 45, as *M. louisiadum*); Akiyama & Reese (1993: 215). ES, NS, SS, WS.**M. subluteum** (Müll. Hal.) Nowak. —Akiyama (1986: 45); Akiyama & Reese (1993: 215). CS, MNP, NS, SS, WS.**M. undulatum** (Dozy & Molk.) H. Robins. —Akiyama & Reese (1993: 216). CS, MNP, NS, SS, WS.**M. wallisii** (Müll. Hal.) H. Robins. —Akiyama & Reese (1993: 216). SS.**Octoblepharum** Hedw.**O. albidum** Hedw. —Akiyama (1986: 43); Yamaguchi (1993b: 303). CS, ES, MNP, NS, WS.**Syrrhopodon** Schwägr.**S. albovaginatus** Schwägr. —Akiyama & Reese (1993: 207). A, ES, NS, SS, WS.**S. aristifolius** Mitt. —Akiyama & Reese (1993: 207). SS, WS.*S. banksii* Müll. Hal. = *S. involutus*, fide Mohamed & Reese (1985).**S. ciliatus** (Hook.) Schwägr. —Akiyama (1986: 45, as *S. cf. ciliatus*); Akiyama & Reese (1993: 208). NS, SS, WS.*S. cf. ciliatus* (Hook.) Schwägr. = misidentified as *S. ciliatus*, fide Akiyama & Reese (1993: 208).**S. croceus** Mitt. —Akiyama & Reese (1993: 208). A, NS, SS, WS.**S. gardneri** (Hook.) Schwägr. —Akiyama & Reese (1993: 208). CS, MNP.**S. hispidissimus** Dixon —Akiyama & Reese (1993: 209). NS.**S. involutus** Schwägr. —Akiyama (1986: 47, as *S. bankii*); Akiyama & Reese (1993: 209). SS, WS.**S. loreus** (Sande Lac.) Reese —Akiyama (1986: 44, as *Calymperes longifolium*); Akiyama & Reese (1993: 209). NS, SS, WS.**S. muelleri** (Dozy & Molk.) Sande Lac. —Akiyama & Reese (1993: 210). A, CS, MNP, NS, SS, WS.***S. pulcher** Reese in Reese *et al.* —Reese *et al.* (1991: 419); Akiyama & Reese (1993: 210). MNP, WS.

Type: West Seram, Gunung Tiang Bendera near Tanahgoyang, 900 m alt., Akiyama C-15577 (holotype in KYO, isotypes in BO, L, LAF, NY).

S. spiculosus Hook. & Grev. —Akiyama & Reese (1993: 210). ES, MNP, WS.**S. trachyphyllus** Mont. —Akiyama & Reese (1993: 211). MNP.**S. tristichus** Nees ex Schwägr. —Akiyama & Reese (1993: 211). CS, MNP, NS, WS.

Cryphaeaceae

Forsstroemia Lindb.*Forsstroemia* sp. = misidentification of *Neolindbergia vitiensis* (Pterobryaceae), fide Akiyama *et al.* (1991: 82).

Daltoniaceae

Archboldiella E.B. Bartram

- A. nymaniana** (M. Fleisch.) H. Akiyama — Akiyama (1986: 56, as *A. pilifera*); Akiyama (1986: 58, as *Distichophyllum* cf. *nymanianum*); Akiyama (1990: 402). NS, SS.
A. pilifera E.B. Bartram = *A. nymanianum*, fide Akiyama (1990: 402).

Calyptrochaeta Desv.

- ***C. isophylla** H. Akiyama — Akiyama (1988: 58, as *Eriopus* sp.); Akiyama (1990: 403). CS, MNP, NS.

Type: Central Seram, Seram Utara, near Elemata-Makualaina, 400–650 m alt., Akiyama C-9396 (holotype in KYO).

- C. remotifolia** (Müll. Hal.) Z. Iwats. et al. — Akiyama (1986: 58, also as *Eriopus parviretis*); Akiyama (1988: 58, as *Eriopus remotifolia* and *E. parviretis*); Akiyama (1990: 403). MNP, SS.

Daltonia Hook. & Tayl.

- D. angustifolia** Dozy & Molk. — Akiyama (1988: 31); Akiyama (1990: 405). MNP.
D. contorta Müll. Hal. — Akiyama (1986: 58, as *D. cf. contorta*); Akiyama (1988: 31); Akiyama (1990: 404). MNP.
D. cf. contorta Müll. Hal. = misidentification of *D. contorta*, fide Akiyama (1988: 31).

Distichophyllum M. Fleisch.

- D. jungermanniaceum** Müll. Hal. ex M. Fleisch. — Akiyama (1986: 58, both as *D. cf. jungermanniaceum* and *Distichophyllum* cf. *jungemannioides*); Akiyama (1988: 38, as *D. jungermannioides*); Akiyama (1990: 409, as *D. jungermannioides*). MNP, SS.
D. jungermannioides (Müll. Hal.) M. Fleisch. = misspelling of *D. jungermanniaceum*.
D. cf. jungermanniaceum Müll. Hal. ex M. Fleisch. = misidentification of *D. jungermanniaceum*, fide Akiyama (1990: 409).
D. cf. nymanianum M. Fleisch. = misidentification of *Archboldiella nymaniana* (Daltoniaceae), fide Akiyama (1990: 402).

Distichophyllum Dozy & Molk.

- D. cuspidatum** (Dozy & Molk.) Dozy & Molk. — Akiyama (1988: 34); Akiyama

(1990: 406). MNP, SS, WS.

- D. cf. cuspidatum* (Dozy & Molk.) Dozy & Molk. — Akiyama (1986: 59) = *Distichophyllum* sp.

- D. denticulatum** Dixon — Akiyama (1988: 35, as *D. aff. santosii*); Akiyama (1990: 408). MNP, SS.

- D. jungermannioides** (Müll. Hal.) Bosch & Sande Lac. — Akiyama (1990: 409). WS.

- D. cf. jungermannioides* (Müll. Hal.) Bosch & Sande Lac. = *Distichophyllum jungermanniaceum*, fide Akiyama (1990: 409).

- D. laxirete** Nog. & Z. Iwats. — Akiyama (1988: 35); Akiyama (1990: 407). MNP, SS.

- D. aff. laxirete* Nog. & Z. Iwats. = misidentification of *D. subnigricaule*.

- D. mittenii** Bosch & Sande Lac. — Akiyama (1986: 59, both as *D. cf. osterwaldii* and *D. aff. osterwaldii*); Akiyama (1988: 34); Akiyama (1990: 407). CS, MNP, SS.

- D. cf. osterwaldii* M. Fleisch. = misidentification of *D. mittenii*, fide Akiyama (1990: 407).

- D. aff. osterwaldii* M. Fleisch. = misidentification of *D. mittenii*, fide Akiyama (1990: 407).

- D. rhizophorum** (M. Fleisch.) Crosby — Akiyama (1988: 33); Akiyama (1990: 406). MNP.

- D. rotundatum** Nog. & Z. Iwats. — Akiyama (1990: 405). MNP, SS, WS.

- D. aff. santosii* E.B. Bartram = misidentification of *D. denticulatum*, fide Akiyama (1988: 408).

- D. subnigricaule** Broth. — Akiyama (1990: 404, as *D. aff. laxirete*). MNP, SS.

- D. cf. subnigricaule* Broth. = *D. subnigricaule*.

Ephemeropsis K.I. Goebel

- E. tjbodensis** K.I. Goebel — Akiyama (1986: 60); Akiyama (1988: 38); Akiyama (1990: 411). SS, WS.

Eriopus (Brid.) Brid.

- E. parviretis* M. Fleisch. = misidentification of *Calypstrochaeta remotifolia* (Daltoniaceae), fide Akiyama (1990: 403).

- E. remotifolia* Müll. Hal. = *Calypstrochaeta*

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remotifolia.*Eriopus* sp. = *Calyptrochaeta isophylla*.**Leskeodon** Broth.

L. acuminatus (Bosch & Sande Lac.) M. Fleisch. —Akiyama (1986: 60, as L. cf. acuminatus); Akiyama (1988: 40); Akiyama (1990: 411). MNP, SS.

L. cf. acuminatus (Bosch & Sande Lac.) M. Fleisch. = misidentification of *L. acuminatus*, fide Akiyama (1990: 411).

L. aff. acuminatus —Akiyama (1986: 60).

Note. Akiyama (1990) did not include the species in his report on the genus.

***L. seramensis** H. Akiyama —Akiyama (1988: 40, as *Leskeodon* sp. 2); Akiyama (1990: 410). SS.

Type: Central Seram, Tehoru, Saunule—Wae—Waya, 110–190 m alt., *Akiyama C-14646* (holotype in KYO). SS.

Dicranaceae

Actractylocarpus Mitt.

A. comosus Dixon —Akiyama (1990: 386). MPN.

Braunfelsia Paris

B. dicranoides (Dozy & Molk.) Broth. —Akiyama (1986: 40, as *B. aff. dicranoides*); Akiyama (1990: 393).

B. aff. dicranoides (Dozy & Molk.) Broth. = misidentification of *B. dicranoides*, fide Akiyama (1990: 393).

B. plicata (Sande Lac.) Broth. —Akiyama (1990: 394).

B. edentula (Mitt.) Wijk & Margad. —Akiyama (1990: 394).

Brotherobryum M. Fleisch.

B. sleumeri B. Allen —Akiyama (2009). MNP.

Bryohumbertia P. de la Varde & Thér.

B. walkeri (Mitt.) J.-P. Frahm —Akiyama (1990: 386). MPN.

Campylopidium (Müll. Hal.) Besch.

C. medium (Duby) Giese & J.P. Frahm —Akiyama (1990: 386). WS.

Campylopus Brid.

C. aureus Bosch & Sande Lac. —Akiyama (1990: 388). MNP.

C. clemensiae E.B. Bartram —Akiyama (1990: 388). MNP.

C. exasperatus (Nees & Blume) Brid. var. *lorentzii* (M. Fleisch.) J.P. Frahm —Akiyama (1990: 387). MPN.

C. exasperatus (Nees & Blume) = misidentification of *C. exasperatus* var. *lorentzii*, fide Akiyama (1990: 387).

C. involutus (Müll. Hal.) A. Jaeger —Akiyama (1990: 387). WS.

Cryptodieranum E.B. Bartram

C. armitii (Müll. Hal.) E.B. Bartram —Akiyama (1986: 41); Akiyama (1990: 394). MNP.

Dicranella (Müll. Hal.) Schimp.

D. coarctata (Müll. Hal.) Bosch & Sande Lac. —Akiyama (1990: 390). A, MNP.

D. setifera (Mitt.) A. Jaeger —Akiyama (1986: 40); Akiyama (1990: 389). MNP, WS.

Dicranodontium Bruch & Schimp.

D. fleischerianum Schultz-Motel —Akiyama (1986: 40); Akiyama (1990: 387). MNP.

Dicranoloma (Renauld) Renauld

D. assimile (Hampe) Renauld —Akiyama (1990: 398); Klazenga (1999: 54). MNP.

D. billardierei (Brid. ex Anon.) Paris —Klazenga (1999: 63). MNP.

D. blumii (Nees) Paris —Akiyama (1986: 40); Akiyama (1990: 395); Klazenga (1999: 69). MNP, WS.

D. braunii (Müll. Hal.) Paris —Akiyama (1990: 399); Klazenga (1999: 76). MNP, NS, WS.

D. brevisetum (Dozy & Molk.) Paris —Akiyama (1986: 40); Akiyama (1990: 400, as *D. leucophyllum*); Klazenga (1999: 82). MNP.

D. cutlackii (Norris & T.J. Kop.) Klazenga —Akiyama (1990: 386, as *D. dymannianum*); Klazenga (1999: 86); Akiyama (2009). MNP.

D. dymannianum E.B. Bartram = misidentification of *D. cutlackii*, fide Klazenga (1999: 87).

D. leucophyllum (Hampe ex Sande Lac.) Paris = *D. brevisetum*, fide Tan & Koponen

(1983) and Klanzega (1999: 79); also see the note given by Klazenga (1999: 83).

Holomitrium Brid.

H. cylindraceum (P. Beauv.) Wijk & Margad. —Akiyama (1993: 250). SS.

***H. seramense** H. Akiyama —Akiyama (1990: 393). NNP.

Type: Central Seram, Kecamatan Seram Utara, en route from Wae Huhu to Gunung O'Wae Puku, 2080 m alt., *Akiyama C-8863* (holotype in KYO).

Leucoloma Brid.

L. molle (Müll. Hal.) Mitt. —Akiyama (1986: 41); Akiyama (1990: 388). MNP, SS, WS.

Microdus Schimp. ex Besch.

M. brasiliensis (Duby) Thériot —Akiyama (1990: 391). WS.

M. cf. insularis (Williams) Broth. = misidentification of *M. miquelianus*, fide Akiyama (1990: 391).

M. aff. leibergii (Williams) Broth. = misidentification of *M. miquelianus*, fide Akiyama (1990: 391).

M. miquelianus (Mont.) Besch. in Paris —Akiyama (1990: 391). MNP, NS, SS, WS.

M. cf. pomiformis (Griff.) Besch. = misidentification of *M. miquelianus*, fide Akiyama (1990: 391).

Trematodon Michx.

T. longicollis Michx. —Akiyama (1986: 42, as *T. aff. longicollis*); Akiyama (1990: 389). WS.

T. aff. longicollis Michx. = misidentification of *T. longicollis*, fide Akiyama (1990: 389).

Wilsoniella Müll. Hal.

W. decipiens (Mitt.) Alston var. **acutifolia** (Dixon) Wijk. & Margad. —Akiyama (1986: 42, as *W. pellucida*); Akiyama (1990: 389, as *W. pellucida*). WS.

W. pellucida (Wils.) Müll. Hal. = *Wilsoniella decipiens* var. *acutifolia*, fide Chien (1994).

Diphysciaceae

Diphyscia Mohr.

D. longifolium Griff. —Akiyama (1989: 152, as *D. loriae*). CS, MNP, SS, WS.

D. mucronifolium Mitt. —Akiyama (1986:

39, as *D. involutum*); Akiyama (1989: 152, as *D. involutum*). CS, SS, WS.

D. loriae Müll. Hal. = *D. longifolium*, fide Magonbo (2003).

D. involutum Mitt. = *D. mucronifolium*, fide Magonbo (2003).

Ditrichaceae

Ditrichum Hampe

D. difficile (Duby) M. Fleisch. —Akiyama (1986: 39); Akiyama (2009). MNP.

D. aff. colijnii Dixon —Akiyama (2009). CS, SS.

Garckea Müll. Hal.

G. comosa (Dozy & Molk.) Wijk & Margad. = *G. flexuosa*, fide Norris & Koponen (1988).

Garckea flexuosa (Griff.) Margad. & Nork. —Akiyama (1986: 40, as *G. comosa*); Akiyama (2009). WS.

Drepanophyllaceae

Mniomalia Müll. Hal.

M. semilimbata (Mitt.) Müll. Hal. —Akiyama (1986: 48); Akiyama (1989: 157). ES, SS.

Entodontaceae

Entodon Müll. Hal.

Entodon sp. —Akiyama (1986: 62).

Erpodiaceae

Solmsiella Müll. Hal.

S. biseriata (Austin) Steere —Akiyama (2009). WS.

Fissidentaceae

Fissidens Hedw.

F. bogoriensis M. Fleisch. —Iwatsuki & Suzuki (1988: 216). SS.

F. bryoides Hedw. var. **schimidii** (Müll. Hal.) R.S. Chopra & S.S. Kumar —Iwatsuki & Suzuki (1988: 216). MNP.

F. ceylonensis Dozy & Molk. —Iwatsuki & Suzuki (1988: 216). ES, MNP, WS.

F. crassinervis Sande Lac. —Iwatsuki & Suzuki (1988: 216). NS, WS.

F. crenulatus Mitt. —Iwatsuki & Suzuki

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- (1988: 217). ES, SS, WS.
- F. crsipulus** Brid. —Iwatsuki & Suzuki (1988: 219, as *F. zippelinaus*). ES, SS, WS.
- F. flabellulus** Thwait. & Mitt. —Iwatsuki & Suzuki (1988: 217). MNP, WS.
- F. geminiflorus** Dozy & Molk. —Iwatsuki & Suzuki (1988: 217). MNP.
- F. holianus** Dozy & Molk. —Iwatsuki & Suzuki (1988: 217). ES, MNP, SS, WS.
- F. hyallinus** Hook.f. & Wils. —Iwatsuki & Suzuki (1988: 217). MNP.
- F. laxus** Sull & Lesq. —Iwatsuki & Suzuki (1988: 217). ES, WS.
- F. microcladus** Thwait. & Mitt. —Iwatsuki & Suzuki (1988: 217). ES, MNP, WS.
- F. nobilis** Griff. —Iwatsuki & Suzuki (1988: 217). CS, ES, MNP, NS, SS, WS.
- F. oblongifolius** Hook.f. & Wils. —Iwatsuki & Suzuki (1988: 217). MNP, NS, MNP.
- F. pallidus** Hook.f. & Wils. —Iwatsuki & Suzuki (1988: 218). CS, MNP, SS, WS.
- F. punctulatus** Sande Lac. —Iwatsuki & Suzuki (1988: 218). CS, NS, MNP, SS.
- F. robinsonii** Broth. —Iwatsuki & Suzuki (1988: 218). ES, NS, SS, WS.
- F. serratus** Müll. Hal. —Iwatsuki & Suzuki (1988: 219). MNP.
- F. splachnobryoides** Broth. in Schum. —Iwatsuki & Suzuki (1988: 219). WS.
- F. subbryoides** Gangulee —Iwatsuki & Suzuki (1988: 219). WS.
- F. taxifolius** Hedw. —Iwatsuki & Suzuki (1988: 219). MNP.
- F. zollingeri** Mont. —Iwatsuki & Suzuki (1988: 219). MNP, NS, WS.
- F. zippelinaus* Dozy & Molk. = *Fissidens crsipulus*, fide Bruggeman-Nannenga (1997).

Garovagliaceae

Garovaglia Endl.

- G. angustifolia** Mitt. var. **bogoriense** (M. Fleisch.) During —Akiyama (1990: 140). MNP, NS, SS, WS.
- G. aristata** Bosch & Sande Lac. —Akiyama (1990: 140). NS, SS.
- G. baeuerlenii** (Geh.) Paris —Akiyama

- (1986: 54); Akiyama (1990: 140). NS, MNP.
- G. compressa** Mitt. var. **compressa** —Akiyama (1990: 140). SS, WS.
- G. aff. compressa** Mitt. = misidentification of *G. elegans*, fide Akiyama (1990: 141).
- G. cf. crispa** (Broth. & Geh.) Broth. —Akiyama (1990: 140). MNP.
- G. elegans** (Dozy & Molk.) Bosch & Sande Lac. —Akiyama (1986: 54, as *G. aff. compressa*); Akiyama (1986: 54); Akiyama (1990: 140). MNP, NS, SS, WS.
- G. elegans* (Dozy & Molk.) Bosch & Sande Lac. f. *elegans* = misidentification of *G. zantenii*, fide Akiyama (1990: 141).
- G. plicata** (Brid.) Bosch & Sadne Lac. —Akiyama (1990: 140). MNP, WS.
- G. zantenii** During —Akiyama (1986: 54, as *G. elegans* f. *elegans*); Akiyama (1990: 140). MNP.

Hookeriaceae

Acrophyllum Vitt & Crosby

- A. javense** (Dixon ex Froelich) Z. Iwats. *et al.* —Akiyama (1988: 56); Akiyama (1997: 12). MNP.

Bryobrothera Thér.

- B. crenulata** (Broth. & Paris) Thér. —Akiyama (1997: 12). WS.

Callicostella (Müll. Hal.) Mitt.

- C. armata** Herzog —Akiyama (1988: 56, as *C. aff. papillata*); Akiyama (1997: 14). CS, MNP, SS, WS
- C. papillata* (Mont.) Mitt. = misidentification of *C. probaktiana*, fide Akiyama (1997: 14).
- C. aff. papillata* (Mont.) Mitt. = misidentification of *C. armata*, fide Akiyama (1997: 14).
- C. probaktiana** (Müll. Hal.) Bosch & Sande Lac. —Akiyama (1986: 56, as *C. papillata*); Akiyama (1997: 14). MNP, NS, SS, WS.

Cyclodictyon Mitt.

- C. blumeanum** (Müll. Hal.) O. Kuntze —Akiyama (1986: 57); Akiyama (1988: 57); Akiyama (1997: 14). MNP, SS.

Hylocomiaceae

Macrothamnium M. Fleisch.

M. javense M. Fleisch. —Akiyama (1988: 52); Akiyama (2009). MNP.

Hypnaceae

Note. Although total nine species of *Ectropothecium* have been recognized among our collections (Akiyama 1988), they are still left in unidentified condition.

Ctenidiadelphus M. Fleisch.

C. spinulus M. Fleisch. —Akiyama (1988: 48); Akiyama (2009). NS.

Ctenidium (Schimp.) Mitt.

C. malacobolum (Müll. Hal.) Broth. —Akiyama (1988: 48); Akiyama (2009). MNP.

C. polychaetum (Bosch & Sande Lac.) Broth. —Akiyama (1988: 48); Akiyama (2009). MNP.

Ectropotheciella M. Fleisch.

E. distichophylla (Hampe ex Dozy & Molk.) M. Fleisch. —Akiyama (1988: 48); Akiyama (2009). CS, NS.

Hypnum Hedw.

H. cf. plumaeforme Wils. —Akiyama (1988: 51). MNP.

Isopterygium Mitt.

I. cf. pohliaecarpum (Sull. & Lesq.) A. Jaeger —Akiyama (1988: 51); Akiyama (2009). WS.

Vesicularia (Müll. Hal.) Müll. Hal.

V. dubiana (Müll. Hal.) Broth. —Akiyama (1988: 52, as *V. cf. dubiana*); Akiyama (2009). CS, NS.

V. cf. dubiana (Müll. Hal.) Broth. —misidentification of *V. dubiana*. fide Akiyama (2009).

V. motagnei (Bel.) M. Fleisch. —Akiyama (1988: 52, as *V. cf. monatnei*); Akiyama (2009). NS, WS.

V. cf. motagnei (Bel.) M. Fleisch. —misidentification of *V. montagnei*. fide Akiyama (2009).

V. reticulata (Dozy & Molk.) Broth. —Akiyama (1988: 52, as *V. cf. reticulata*); Akiyama (2009). NS, SS.

V. cf. reticulata (Dozy & Molk.) Broth. —

misidentification of *V. reticulata*. fide Akiyama (2009).

Stereodontopsis R.S. Williams

S. excavata (Broth.) Ando —Akiyama (2009). NS.

Hypnodendraceae

Hypnodendron Mitt.

H. auricomum Broth. & Geh. subsp. **auricomum** —Akiyama (1986: 49); Akiyama (1988: 19); Akiyama (1989a: 201); Akiyama (1989b: 159). MNP.

H. dendroides (Brid.) Touw —Akiyama (1986: 49); Akiyama (1988: 19); Akiyama (1989b: 158). MNP, WS.

H. diversifolium Broth. & Geh. —Akiyama (1986: 49); Akiyama (1988: 19); Akiyama (1989b: 159). MNP.

H. milei Mitt. subsp. **korthalsii** (Bosch & Sande Lac.) Touw —Akiyama (1986: 49); Akiyama (1988: 20); Akiyama (1989b: 159). MNP.

H. opacum M. Fleisch. —Akiyama (1986: 49, as *Hypnodendron* sp.); Akiyama (1988: 22, as *Hypnodendron* sp.); Akiyama (1989a: 199); Akiyama (1989b: 158). MNP.

H. reinwardtii (Reinw. & Hornsch.) Lindb. subsp. **caducifolium** (Herzog) Touw —Akiyama (1986: 49); Akiyama (1988: 20); Akiyama (1989b: 160). MNP.

H. subspininervium (Müll. Hal.) A. Jaeger subsp. **arborescens** (Mitt.) Touw —Akiyama (1986: 49); Akiyama (1988: 21); Akiyama (1989b: 161). MNP, NS, SS.

H. vitiense Mitt. subsp. **vitiense** —Akiyama (1986: 49); Akiyama (1988: 22); Akiyama (1989b: 161). CS, MNP.

Hypopterygiaceae

Cyatophorella (Broth.) M. Fleisch.

C. adiantum (Griff.) M. Fleisch. = misidentification of *Cyatophorum spinosum*, fide Akiyama (1992: 115).

C. parvifolia (Bosch & Sande Lac.) M. Fleisch. ≡ *Cyatophorum parvifolia*, fide Kruijer (2002).

C. spinosa (Müll. Hal.) M. Fleisch. = *Cy-*

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athophorum spinosum, fide Akiyama (1992: 114).

C. tenera (Bosch & Sande Lac.) M. Fleisch. = *Cyathophorum parvifolia*, fide Kruijer (2002).

C. cf. tenera (Bosch & Sande Lac.) M. Fleisch. = misidentification of *Cyathophorum parvifolia*, fide Akiyama (1992: 112).

Cyathophorum P. Beauv.

C. parvifolia Bosch & Sande Lac. —Akiyama (1986: 60, as *Cyothophorella* cf. *tenera*); Akiyama (1988: 42, as *Cyothophorella tenera* and *C. cf. parvifolia*); Akiyama (1992: 112, as *Cyothophorella parvifolia*); Kruijer (2002: 357).

C. spinosum (Müll. Hal.) H. Akiyama. —Akiyama (1986: 60, as *Cyathophorella spinosa* and *C. adiantum*); Akiyama (1988: 43); Akiyama (1992: 114); Kruijer (2002: 319).

Dendrocyathophorum Dixon

D. decolyi (Broth. ex M. Fleisch.) Kruijer —Akiyama (1992: 112, as *D. paradoxum*); Kruijer (2002: 290). MNP.

D. paradoxum Broth. in Cardot = *D. decolyi*, fide Kruijer 2002: 285.

Hypopterygium Brid.

H. aristatum Bosch & Sande Lac. = *H. flavolimbatum*, fide Kruijer (2002: 170).

H. cf. aristatum Bosch & Sande Lac. = misidentification of *H. flavolimbatum* and *H. vriesei*, fide Akiyama (1992: 116-117).

H. chamaedrys Bosch & Sande Lac. = *H. vriesei*, fide Kruijer (2002: 189).

H. flavolimbatum Müll. Hal. —Akiyama (1986: 60, as *H. cf. aristatum*); Akiyama (1988: 46, as *H. aristatum*); Akiyama (1992: 116, as *H. aristatum*); Kruijer (2002: 189). MNP.

Note. According to Kruijer (2002), Seram plants include both the normal and East Malesian variants.

H. humile Mitt. ex Bosch & Sande Lac. = *H. tamarisci*, fide Kruijer (2002: 200).

Note. Kruijer (2002: 187) wrote that some specimens reported as *H. humile* by Akiyama (1992) were actually *H. flavolim-*

batum.

H. tamarisci (Sw.) Brid. ex Müll. Hal. —Akiyama (1986: 60, as *H. tenellum*); Akiyama (1988: 45, as *H. humile*); Akiyama (1992: 116, as *H. humile*); Kruijer (2002: 242). MNP, NS, SS.

H. tenellum Müll. Hal. = misidentification of *H. tamarisci*, fide Akiyama (1992: 116).

H. vriesei Bosch & Sande Lac. —Akiyama (1986: 60, as *H. cf. aristatum* and *H. cf. chamaedrys*); Akiyama (1988: 46, also as *H. chamaedrys*); Akiyama (1992: 117, also as *H. chamaedrys*); Kruijer (2002: 198). CC, MNP, NS, SS, WS.

Lopidium Hook.f. & Wils.

L. javanicum Hampe. = misidentification of *L. struthiopteris*, fide Akiyama (1992: 118) and Kruijer (2002: 266).

L. struthiopteris (Brid.) M. Fleisch. —Akiyama (1986: 60, as *L. javanicum* and *L. trichocladon*); Akiyama (1988: 48, also as *L. trichocladon*); Akiyama (1992: 118, also as *L. trichocladon*); Kruijer (2002: 281). MNP, SS.

L. trichocladon (Bosch & Sande Lac.) M. Fleisch. = *L. struthiopteris*, fide Kruijer (2002: 266).

Lembophyllaceae

Camptochaete Reichdt.

C. excavata (Taylor) A. Jaeger —Akiyama (1993: 220, as *C. vaga*). MNP.

C. vaga (Müll. Hal.) Broth. ≡ *C. excavata*, fide Tangney (1997: 102)

Leptostomataceae

Leptostomum R. Brown

L. intermedium Broth. —Akiyama (1986: 48, as *L. pinaiae*); Akiyama (1988: 17); Akiyama (1989: 156). MNP.

L. pinaiae Herzog = *L. intermedium*, fide Hyvönen (1987).

Leskeaceae

Pseudoleskeopsis Broth.

P. aff. zippelii (Dozy & Molk.) Broth. —Akiyama (1986: 60).

Leucobryaceae

Leucobryum Hampe

L. aduncum Dozy & Molk. var. **aduncum** — Yamaguchi (1993b: 299). MNP, SS, WS.

L. aduncum Dozy & Molk. var. **scalare** (Müll. Hal. ex M. Fleisch.) Eddy — Akiyama (1986: 42, as *L. scarale*); Yamaguchi (1993b: 299). A, WS.

L. arfakianum Müll. Hal. ex Geh. — Akiyama (1986: 43, as *L. subsanctum*); Yamaguchi (1993b: 299). MNP, WS.

L. bowringii Mitt. — Akiyama (1986: 42); Yamaguchi (1993b: 300). MNP, WS.

L. candidum (P. Beauv.) Wils. var. *pentastichum* (Dozy & Molk.) Dixon = misidentification of *L. chlorophyllosum*, fide Yamaguchi (1993a).

L. chlorophyllosum Müll. Hal. — Akiyama (1986: 42, as *L. candidum* var. *pentastichum*); Yamaguchi (1993b: 300). CS, SS, WS.

L. javense (Brid. ex Schwägr.) Mitt. var. **javense** — Akiyama (1986: 42); Yamaguchi (1993b: 300). MNP, WS.

L. javense (Brid. ex Schwägr.) Mitt. var. **cystathifolium** (Dixon) Yamaguchi — Yamaguchi (1993b: 300). CS, MNP.

L. javense (Brid. ex Schwägr.) Mitt. var. **novae-guinea** (E.B. Bartram) Yamaguchi — Akiyama (1986: 42, as *L. cf. novae-guineae*); Yamaguchi (1993b: 300). MNP.

L. cf. novae-guineae E.B. Bartram = *L. javense* var. *novae-guinea*, fide Yamaguchi (1993a).

L. sanctum (Brid.) Hampe — Akiyama (1986: 42); Yamaguchi (1993b: 300). A, ES, CS, MNP, NS, SS, WS.

L. scarale Müll. Hal. ex M. Fleisch. = *L. aduncum* var. *scalare*, fide Yamaguchi (1993a).

L. sericeum Broth. ex Geh. — Yamaguchi (1993b: 301). A, WS.

L. subsanctum Broth. = *L. arfakianum*, fide Yamaguchi (1993a).

Schistomitrium Dozy & Molk.

S. apiculatum (Dozy & Molk.) Dozy & Molk. — Akiyama (1986: 43); Yamaguchi

(1993b: 301). CS, MNP.

S. mucronifolium (Müll. Hal.) M. Fleisch. — Akiyama (1986: 43); Yamaguchi (1993b: 301). MNP.

S. robustum Dozy & Molk. — Akiyama (1986: 43, as *S. cf. robustum* and *S. subrobustum*); Yamaguchi (1993b: 301). CS, MNP, WS.

S. cf. robustum Dozy & Molk. = misidentification of *S. robustum*, fide Yamaguchi (1993b: 301).

S. subrobustum Broth. = misidentification of *S. robustum*, fide Yamaguchi (1993b: 301).

Leucomiaceae

Leucomium Mitt.

L. aneurodictyon (Müll. Hal.) A. Jaeger — Akiyama (1986: 60); Akiyama (1989: 158). A, NS, WS.

Meteoriaceae

Aerobrydium M. Fleisch. ex Broth.

A. crispifolium (Broth. & Geh.) M. Fleisch. — Akiyama (1997: 9). MNP.

Aerobryopsis M. Fleisch.

A. leptosigmata (Geh.) M. Fleisch. — Akiyama (1986: 55); Akiyama (1997: 10). CC, MNP, SS.

A. longissima (Dozy & Molk.) M. Fleisch. — Akiyama (1986: 55, as *Pseudobarbella attenuata*); Akiyama (1997: 10). A, CS, MNP, NS, SS, WS.

A. wallichii (Brid.) M. Fleisch. = misidentification of *A. leptosigmata*, fide Akiyama (1997: 10).

Floribundaria M. Fleisch.

F. floribunda (Dozy & Molk.) M. Fleisch. — Akiyama (1986: 55); Akiyama (1997: 11). CS, MNP, NS, SS, WS.

F. pseudofloribunda M. Fleisch. — Akiyama (1986: 55); Akiyama (1997: 11). NS, CS, SS.

Meteoriump Dozy & Molk.

M. buchananii (Brid.) Broth. — Akiyama (1997: 11). CS, MNP, NS, SS.

Note. Akiyama (1997) recognized two forms, differentiated by size, among the

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Seram collections. The larger form occurs at higher elevations, the smaller one in lowland forests.

M. miquelianum (Müll. Hal.) M. Fleisch. subsp. *miquelianum* = misidentification of *M. buchananii*, fide Akiyama (1997: 11).

M. cf. subpolytrichum (Besch.) Broth. = misidentification of *M. buchananii*, fide Akiyama (1997: 11).

Papillaria A. Jaeger & Sauerb.

P. fusecescens (Hook.) A. Jaeger —Akiyama (1986: 11); Akiyama (1997:12). MNP.

Pseudobarbella Nog.

P. ancistrodes (Renauld & Cardot) Manuel —Akiyama (1997: 12). NS.

P. attenuata (Thwait. & Mitt.) Nog. = misidentification of *Aerobryopsis longissima* (Meteliaceae), fide Akiyama (1997, 10).

Mniaceae

Plagiomnium T.J. Kop.

P. integrum (Bosch & Sande Lac.) T.J. Kop. —Akiyama (1986: 48). CS, MNP.

P. rhynchophorum (Harv.) T.J. Kop. —Akiyama (2009). CS, MNP.

P. succulentum (Mitt.) T.J. Kop. —Akiyama (1986: 48); Akiyama (2009). MNP, NS, SS.

Pohlia Hedw.

P. elongata Hedw. —Akiyama (2009). MNP.

Myuriaceae

Oedipodium Mitt.

O. rufescens (Reinw. & Hornsch.) Mitt. —Akiyama (1993: 221). MNP.

Pilocium (Müll. Hal.) Broth.

P. pseudorufescens (Hampe) Müll. Hal. in Broth. —Akiyama (1993: 221). ES, NS, WS.

Neckeraceae

Himanthocladium (Mitt.) M. Fleisch.

H. loriforme (Bosch & Sande Lac.) M. Fleisch. —Akiyama (1993: 222). MNP, NS, SS, WS.

H. plumula (Nees) M. Fleisch. —Akiyama (1993: 223). CS, MNP, NS, SS.

H. submontanum Enroth —Akiyama (1993:

223). MNP.

Homaliodendron M. Fleisch.

H. exiguum (Bosch & Sande Lac.) M. Fleisch. —Akiyama (1988: 55); Akiyama (1993: 223). ES, NS, WS.

H. flabellatum (Sm.) M. Fleisch. —Akiyama (1988: 55, as *H. scalpellifolium*); Akiyama (1993: 224). CS, MNP, SS, WS

Note. There are two distinct types in Seram, such as “scalpellifolium” type and “flabellatum” type. The former dwells in montane or mossy forests and the latter in lowland to lower montane forests.

H. microdendron (Mont.) M. Fleisch. —Akiyama (1993: 224). MNP.

Neckeropsis Reichardt

N. gracilenta (Bosch & Sande Lac.) M. Fleisch. —Akiyama (1988: 56); Akiyama (1993: 225). A, ES, MNP, NS, WS.

N. lepineana (Mont.) M. Fleisch. —Akiyama (1988: 56); Akiyama (1993: 225). CS, ES, MNP, NS, SS, WS.

Pinnatella (Müll. Hal.) M. Fleisch.

P. intralimbata M. Fleisch. —Akiyama (1988: 56); Akiyama (1993: 226). WS.

P. kuehliana (Bosch & Sande Lac.) M. Fleisch. —Akiyama (1993: 227). MNP, NS, SS, WS.

P. mariei (Besch.) Broth. —Akiyama (1993: 226). ES, NS, SS.

P. mucronata (Bosch & Sande Lac.) M. Fleisch. —Akiyama (1988: 56, as *P. cf. mucronata*); Akiyama (1993: 226). CS, MNP, NS, SS, WS.

Thamnobryum Nieuwl.

T. ellipticum (Bosch & Sande Lac.) Nog. & Z. Iwats. —Akiyama (1993: 227). MNP, SS.

T. latifolium (Bosch & Sande Lac.) Nieuwl. —Akiyama (1993: 228). MNP.

T. subserratum (Hook.) Nog. & Z. Iwats. —Akiyama (1993: 228). MNP.

T. negrosens (E.B. Bartram) Z. Iwats. & B.C. Tan —Akiyama (1993: 228); Akiyama (2009). NS, SS.

Orthotrichaceae

Desmotheca Lindb.**D. apiculata** (Dozy & Molk.) Lindb. —Akiyama (1986: 50); Akiyama (2009). NS.**Groutiella** Steere ex Crum & Steere**G. tomentosa** (Hornsch.) Wijk & Marg. —Akiyama (2009). SS, WS.**Leptodontiopsis** Broth.**L. orientalis** Dixon —Akiyama (2009). MNP.**Macromitrium** Brid. [identification was mostly based on Vitt *et al.* (1995) otherwise noted].**M. acuminatum** (Reinw. & Hornsch.) Müll. Hal. —Akiyama (2009). MNP.**M. angustifolium** Dozy & Molk. —Akiyama (2009). MNP, SS, WS.**M. archboldii** E.B. Bartram —Akiyama (2009). MNP.**M. crinale** Broth. & Geh. —Akiyama (2009). MNP.**M. cuspidatum** Hampe —Akiyama (2009). MNP.**M. erubescens** E.B. Bartram —Akiyama (2009). MNP.**M. falcatum** Müll. Hal. —Akiyama (2009). SS, WS.**M. fuscescens** Schwägr. —Akiyama (2009). CS, ES, MNP, NS, SS, WS.**M. incurvifolium** (Hook.f. & Grev.) Schwägr. —Akiyama (2009). MNP, SS, WS.**M. longicaule** Müll. Hal. —Akiyama (2009). MNP.**M. noguchianum** Schultz-Motel —Akiyama (2009). MNP.**M. norrisianum** Vitt. —Akiyama (2009). MNP.**M. ochraceum** (Dozy & Molk.) Müll. Hal. —Akiyama (2009). MNP.**M. orthotrichum** Nees ex Schwägr. —Akiyama (2009). MNP, WS.**M. parvifolium** Dixon —Akiyama (2009). MNP, WS.**M. yuleanum** Broth. & Geh. —Akiyama (2009). MNP.**Schlotheimia** Brid.**S. emarginato-pilosa** Herzog —Akiyama (2009). MNP.**S. mac-gregorii** Broth. & Geh. —Akiyama (2009). MNP.**S. wallisii** Müll. Hal. —Akiyama (2009). MNP.**Zygodon** Hook. & Taylor**Z. intermedius** Bruch & Schimp. —Akiyama (2009). MNP.**Z. novoguinensis** E.B. Bartram —Akiyama (2009). MNP.

Phyllogoniaceae

Orthorrhynchium Reichardt**O. phyllogonioides** (Sull.) E.B. Britton ≡ *Cryptogonium phyllogonioides*, fide Isovita (1986).

Polytrichaceae

Dawsonia R. Brown**D. longifolia** (Bruch & Schimp.) Zanten = *D. superba*, fide Zanten (1997).**D. papuana** F. Müll. ex Geh. —Akiyama (1986: 39); Akiyama (1989: 152). MNP.**D. superba** Grev. —Akiyama (1989: 153, as *D. longifolia*). MNP, WS.**Pogonatum** P. Beauv.**P. macrophyllum** Dozy & Molk. —Akiyama (1989: 154). MNP, SS, WS.**P. cf. macrophyllum** Dozy & Molk. = mis-identification of *P. macrophyllum*, fide Akiyama (1989).**P. neesii** (Müll. Hal.) Dozy —Akiyama (1989: 156). SS, WS.**P. philippinense** (Broth.) Touw —Akiyama (1989: 155). SS.**P. piliferum** (Dozy & Molk.) Touw —Akiyama (1986: 39, as *Racelopus pilifer*); Akiyama (1989: 154). MNP, SS, WS.**P. subtortile** (Müll. Hal.) A. Jaeger —Akiyama (1989: 155). SS.**P. cf. subtortile** —Akiyama (1989: 156). MNP, WS.**Polytrichastrum** G.L. Smith**P. gracile** (Sw. ex Brid.) G.L. Smith —Akiyama (1986: 39, as *Polytrichum gracile*); Akiyama (1989: 153, as *P. gracile*). MNP.**Polytrichum** Hedw.*P. gracile* Dicks. in Menz. = *Polytrichastrum*

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- gracile* (Sw. ex Brid.) G.L. Sm. (2009). SS.
- Racelopus* Dozy & Molk. **T. brachydontium** Bruch ex F.A. Müll. —
- R. pilifer* Dozy & Molk. = *Polygonatum pilifer*, Akiyama (1996: 166). MNP.
fide Touw (1986: 29).
- Plagiotheciaceae
- Plagiothecium** Bruch & Schimp. **W. edentula** Mitt. —Akiyama (1996: 166). CS.
- P. cf. euryphyllum** (Cardot & Thér.) Z. Iwats. **W. aff. exerta** (Broth.) Chen —Akiyama
—Akiyama (1988: 52). MNP. (1996: 167). MNP.
- Pottiaceae
- Anoectangium** Schwägr. **C. integrifolium** (E.B. Bartram) Nog. —Akiyama (1993: 250). SS.
- A. aestivum** (Hedw.) Mitt. —Akiyama (1996: 158). MNP.
- Barbula** Hedw. **C. recurvulum** (Broth.) Broth. in Thér. —
- B. consanguinea** (Thwait. & Mitt.) A. Jaeger Akiyama (1996: 159). CS, ES. Akiyama (1990: 136). CS, NS, WS.
- B. javanica** Dozy & Molk. —Akiyama (1996: 161). ES, NS, SS, WS.
- B. novoguinense** Broth. —Akiyama (1996: 163). NS.
- B. pachyloma** Broth. —Akiyama (1996: 163); Akiyama (2009). A, MNP, NS, SS, WS.
- B. robbinsii** E.B. Bartram —Akiyama (1996: 165). MNP, SS.
- *B. seramensis** H. Akiyama —Akiyama (1996: 161). NS, SS.
- Type: Central Seram, en route from Nihe-hata to Hatumete, 180 m alt., Akiyama C-16743 (holotype in HYO, isotypes in BM, BO, FH, H, L, MO, NY).
- Gymnostomum** Nees & Hornsch. **C. phyllgonioides** (Sull.) Isov. —Akiyama (1986: 55, as *Orthorrhynchium phyllgonioides*); Akiyama (1990: 137). CS, NS, SS, WW.
- G. aurantiacum** (Mitt.) Paris —Akiyama (1996: 165). CS, MNP, SS, WS.
- Hyophila** Brid. **Euptychium** Schimp.
- H. involuta** (Hook.) A. Jaeger —Akiyama (1996: 165). ES, NS, SS, MNP, WS.
- Leptodontium** (Müll. Hal.) Lindb. *Euptychium* sp. = misidentification of *Garovaglia compressa* var. *compress* (Garovagliaceae), fide Akiyama (1990: 140).
- L. flexifolium** (Dicks. ex With.) Hampe —
- Akiyama (1996: 166). MNP.
- Pseudosymblepharis** Broth. **Neolindbergia**
- P. angustata** (Mitt.) Hilp. —Akiyama (1996: 166). MNP.
- Splachnobryum** Müll. Hal. **N. vitiensis** (E.B. Bartram) Enroth —Akiyama (1986: 53, as *Forsstroemia* sp.); Akiyama et al. (1991: 82). MNP, SS.
- S. limbatum** Norris & Zander —Akiyama (2009). SS.
- S. obtusum** (Brid.) Müll. Hal. —Akiyama (1990: 137). MNP, SS, WS.
- Pterobryaceae**
- Calyptothecium** Mitt. **N. veloiae** H. Akiyama et al. (1991: 84). CS.
- C. phyllgonioides** (Sull.) Isov. —Akiyama (1986: 55, as *Orthorrhynchium phyllgonioides*); Akiyama (1990: 137). CS, NS, SS, WW.
- Euptychium** Schimp. **Pterobryopsis**
- Euptychium* sp. = misidentification of *Garovaglia compressa* var. *compress* (Garovagliaceae), fide Akiyama (1990: 140).
- H. involuta** (Hook.) A. Jaeger —Akiyama (1996: 165). ES, NS, SS, MNP, WS.
- L. flexifolium** (Dicks. ex With.) Hampe —
- Akiyama (1996: 166). MNP.
- P. angustata** (Mitt.) Hilp. —Akiyama (1996: 166). MNP.
- S. limbatum** Norris & Zander —Akiyama (2009). SS.
- S. obtusum** (Brid.) Müll. Hal. —Akiyama (1990: 137). MNP, SS, WS.
- P. crassicaulis** (Müll. Hal.) M. Fleisch. —
- Akiyama (1986: 54, as *P. aff. gedeensis*); Akiyama (1990: 137). MNP.
- P. aff. gedeensis* M. Fleisch. = misidentification of *P. crassicaulis*, see Akiyama (1990, 137).
- S. neckeroides** Dozy & Molk. —Akiyama (1990: 137) (also as *S. subneckeroides*). CS, MNP, SS, WS.

S. subneckeroides Broth. = misidentification of *Symphyodon neckeroides*, see Akiyama 1990: 137.

Sympysodontella M.Fleisch.

S. attenuata (Mont.) M. Fleisch. —Akiyama (1986: 54, as *S. cf. attenuata*); Akiyama (1990: 138). MNP.

S. cf. subulata Broth. —Akiyama (1986: 54, as *Sympysodontella* sp.); Touw (1992: 350).

S. parviflora E.B. Bartram —Akiyama (1986: 54); Akiyama (1990: 138). MNP.

S. cylindracea (Mont.) M. Fleisch. —Akiyama (1986: 54); Akiyama (1990: 138). SS, MNP, WS.

S. splendens (Reinw. & Hornsch.) Touw & Magill —Akiyama (1986: 54, as *S. cf. obtusa*); Akiyama (1990: 138). NS.

S. cf. obtusa Tixier = misidentification of *S. splendens*, see Touw (1992: 350).

S. sp. = misidentification of *S. cf. subulata*, see Touw (1992: 350).

Ptychomniaceae

Glyphothecium Hampe

G. sciuroides (Hook.) Hampe —Akiyama (1986: 50, as *G. aff. sciuroides*); Akiyama (1989: 157). MNP.

G. aff. sciuroides (Hook.) Hampe = misidentification of *G. sciuroides*, fide Akiyama (1989: 157).

Racopilaceae

Powellia Mitt.

***P. macromitrioides** H. Akiyama —Akiyama (1988: 24, as *Powellia* sp.); Akiyama (1990: 130). NS (MNP).

Type: Indonesia [Moluccas]. Seram: Rumah Sokat Batu near Sawai, Kecamatan Seram Utara, 230 m, Akiyama C-9930 (holotype in KYO, isotypes in BO, NY).

P. parvula (E.B. Bartram) Norris & T.J. Kop. —Akiyama (2009). MNP.

Powellia sp. = misidentification of *P. macromitrioides*, see Akiyama (1990: 130).

Racopilum P. Beauv.

R. cuspidigerum (Schwägr.) Aongstr. —Akiyama (1986: 53); Akiyama (1988: 27); Akiyama (1990: 133). MNP, NS, SS, WS.

Note. Akiyama (1988) recognized two types in this pantropical species; one corresponding to typical *R. cuspidigerum*, while the other has upright capsules, extended pilifera at leaf apices, and much smaller laminal cells.

R. spectabile Reinw. & Hornsch. —Akiyama (1986: 53); Akiyama (1988: 26); Akiyama (1990: 134). CS, MNP, NS, SS, WS.

R. aff. spectabile —Akiyama (1988: 26). MNP.

R. verrucosum Herzog —Akiyama (1986: 53); Akiyama (1988: 28); Akiyama (1990: 135). MNP.

Note. This rare species was originally described based on Seram specimens (Herzog 1916: 238). Akiyama & van Zanten (1999) reported another species with strongly verrucose setae, *Racopilum niutensis* Akiyama & Zanten, from West Kalimantan.

Regmatodontaceae

Regmatodon Brid.

R. cf. polycarpus (Griff.) Mitt. —Akiyama (2009). MNP.

Rhizogoniaceae

Hymenodon Hook.f. & Wils.

H. angustifolius Sande Lac. —Akiyama (1990: 130). MNP.

H. pilifer Hook.f. & Wils. subsp. **sericeus** (Dozy & Molk.) Kartt. & Bäck —Akiyama (1986: 48, as *H. sericeus*); Akiyama (1990: 130). MNP.

H. cf. sericeus (Dozy & Molk.) Müll. Hal. = misidentification of *H. pilifer* subsp. *sericeus*, fide Akiyama (1990: 130) and Koponen et al. (1986).

Hymenodontopsis Herzog

H. stremanii Herzog —Akiyama (1986: 48); Akiyama (1990: 129). MNP.

Pyrrhobryum Mitt.

P. latifolium (Bosch. & Sande Lac.) Mitt. —

- Akiyama (1990: 131). CS.
- P. spiniforme** (Hedw.) Mitt. —Akiyama (1986: 49); Akiyama (1990: 131). CS, MNP, SS, WS.
- Rhizogonium** Brid.
- R. graeffeanum** (Müll. Hal.) A. Jaeger — Akiyama (1990: 130). MNP.
- Sematophyllaceae
- Acanthorrhynchium** M. Fleisch.
- A. papillatum** (Harv.) M. Fleisch. —Akiyama (1993: 231). NS, ES.
- Acporium** Mitt.
- A. diminutum** (Brid.) M. Fleisch. —Akiyama (1993: 232, also as *A. subulatum*). CS, MNP, WS.
- A. hamulatum** (M. Fleisch.) M. Fleisch. — Akiyama (1993: 232). MNP.
- Note. This species was collected from Seram Island under the name of *A. warburgii* (Broth.) M. Fleisch. in L & NY.
- A. hermaphroditum** (Müll. Hal.) M. Fleisch. —Akiyama (1993: 232). MNP, WS.
- A. longicaule** (Sande Lac.) M. Fleisch. — Akiyama (1993: 233). MNP, WS.
- A. secundum** (Reinw. & Hornsch.) M. Fleisch. —Akiyama (1993: 233). MNP.
- Note. Specimens referred to *A. stramineum* (Reinw. & Hornsch.) M. Fleisch. were collected from Ambon (Robinson 2269 & 2279, NY!), but they are actually *A. secundum*.
- A. aff. secundum** —Akiyama (1993: 233). WS.
- A. sigmatodontium** (Müll. Hal.) M. Fleisch. —Akiyama (1993: 233). CS, MNP, WS.
- Acporium** sp. —Akiyama (1993: 233). MNP.
- Aptychella** (Broth.) Herzog
- A. scalaris** (Müll. Hal.) M. Fleisch. —Akiyama (1993: 233). MNP.
- Aptychella* sp. = misidentification of *Dimorphocladon borneense* (Symphyodontaceae), fide Akiyama (1997: 29).
- Brotherella** Loeske ex M. Fleisch.
- B. falcata** (Dozy & Molk.) M. Fleisch. — Akiyama (1993: 235). MNP.
- Clastobryum** Dozy & Molk.
- C. cf. epiphyllum** (Renauld & Cardot) B.C. Tan —Akiyama (1993: 236). MNP, SS.
- Glossadelphus** M. Fleisch.
- G. zollingeri** (Müll. Hal.) M. Fleisch. —Akiyama (1993: 236). NS.
- G. aff. zollingeri** —Akiyama (1993: 236). WS.
- Isocladiella** Dixon
- I. surcularis** (Dixon) B.C. Tan & Mohamed —Akiyama (1993: 236, as *I. phyllogonoides*). MNP, WS.
- I. phyllogonoides* Dixon = *I. surcularis*, fide Tan & Mohamed (1990).
- Macrohymenium** Müll. Hal.
- M. rufum** Müll. Hal. —Akiyama (1993: 237). MNP, SS.
- Mastopoma** Cardot
- M. armittii** (Broth. & Geh.) Broth. —Akiyama (1993: 238). MNP.
- M. brauniana** (Bosch & Sande Lac.) H. Akiyama —Akiyama (1993: 238); Akiyama (2006: 9). MNP.
- M. aff. robinsonii** (Broth.) E.B. Bartram — Akiyama (1993: 238). MNP.
- Meiothecium** Mitt.
- M. aff. bogoriense** M. Fleisch. —Akiyama (2009). WS.
- M. hamatum** (Müll. Hal.) Broth. —Akiyama (1993: 239); Akiyama (2009). MNP, WS.
- M. jagorii** (Müll. Hal.) Broth. —Akiyama (1993: 239). WS.
- M. microcarpum** (Hook.) Mitt. —Akiyama (1993: 240); Akiyama (2009). A, SS, WS.
- Papillidiopsis** (Broth.) W.R. Buck & B.C. Tan
- P. luxurians** (Dozy & Molk.) W.R. Buck & B.C. Tan —Akiyama (1993: 240). NS.
- Pseudohypnella** (Broth.) M. Fleisch.
- P. verrucosa** (Bosch & Sande Lac.) M. Fleisch. —Akiyama (1993: 241); Akiyama (2009). MNP.
- Rhaphidostichum** M. Fleisch.
- R. bunodiocarpum** (Müll. Hal.) M. Fleisch. —Akiyama (1993: 241). ES, MNP, NS.
- Rhaphidostichum** sp. —Akiyama (1993: 242). A, WS.
- Sematophyllum** Mitt.

S. microcladiellum M. Fleisch. —Akiyama (1993: 242). A, ES, NS, WS.

S. saproxylophilum (Müll. Hal.) M. Fleisch. —Akiyama (1993: 242). SS, WS.

Taxithelium Spruce

***T. damanhurianum** P.S. Câmara —Câmara (2009: 590); Akiyama (2009). MNP, NS.

Type: Northern Seram, Manusela national Park, Rumah Sokat Batu in the vicinity of Sawai, 100 m alt., *Akiyama C-9923* (holotype in HYO; isotypes in L, NY).

Note. Câmara (2009) designated *Akiyama C-9329* as the type of *T. damanhurianum*, but it must be a typographical error. Among the three specimens (*C-9329*, *C-9409* and *C-9923*) that he identified as *T. damanhurianum*, only *C-9923* has complete sporophytes. In addition, judging from information given for the type locality, as well as annotation on the specimens, *Akiyama C-9923* must be the type of *T. damanhurianum*.

T. isoclada (Bosch & Sande Lac.) Renauld & Cardot —Akiyama (2009). SS.

T. kerianum (Broth.) Broth. —Akiyama (1993: 243). MNP.

T. levieri (Broth. & Geh.) Broth. —Akiyama (1993: 243). MNP, NS.

T. lindbergii (Sande Lac.) Renauld & Cardot —Akiyama (1993: 244). NS.

T. nepalenese (Schwägr.) Broth. = misidentification of *T. planum*, fide Akiyama (1993: 244).

T. planum (Brid.) Mitt. —Akiyama (1993: 244). ES, CS, MNP, NS, SS, WS.

Note. We confirmed the presence of *T. planum* in Ambon (*Robinson 2272 & 2311* in L and NY; *Zippelius s.n.*, in L).

Trichosteleum Mitt.

T. hamatum (Dozy & Molk.) A. Jaeger —Akiyama (1993: 245). CS, ES, MNP, NS, SS, WS.

Note. We confirmed the presence of *T. hamatum* in Ambon (*Robinson 2283 & 2319* in FH, L and NY).

T. aff. hamatum —Akiyama (1993: 246). NS, SS, WS.

T. mannosum (Müll. Hal.) A. Jaeger —Akiyama (1993: 246). MNP, SS.

Trismegistia (Müll. Hal.) Broth.

T. calderensis (Sull.) Broth. —Akiyama (1986: 64, as *T. cf. rigida* and *T. cf. rigida* f. *pendula*); Akiyama (1993: 247, as *T. rigida*). MNP, WS.

T. lancifolia (Harv.) Broth. —Akiyama (1993: 247). CS, MNP, NP, SS, WS.

Note. Both var. *lancifolia* and var. *korthalsii* (Dozy & Molk.) M. Fleisch. are present in Seram Island. We also confirmed the presence of *T. lancifolia* in Ambon (*Robinson 2280*, FH).

T. rigida (Mitt.) Borth. = misidentification of *T. calderensis*, fide Akiyama (1993: 247).

T. cf. rigida (Mitt.) Broth. = misidentification of *T. calderensis*, fide Akiyama (1993: 247).

T. cf. rigida (Mitt.) Broth. f. *pendula* M. Fleisch. = misidentification of *T. calderensis*, fide Akiyama (1993: 248).

T. panduriformis (Wright) Broth. —Akiyama (1986: 64, as *T. cf. panduriformis*); Akiyama (1993: 248). MNP.

T. cf. panduriformis (Wright) Broth. = misidentification of *T. panduriformis*, fide Akiyama (1993: 248).

Warburgella Müll.Hal.

W. aureo-nitida (E.B. Bartram) H. Akiyama —Akiyama (1993: 249). MNP.

W. breviseta (Broth.) Broth. —Akiyama (1993: 249). MNP.

W. subleptorrhynchoides (M. Fleisch.) M. Fleisch. —Akiyama (1993: 249). MNP.

Sorapillaceae

Sorapilla Spruce & Mitt.

S. papuana Broth. & Geh. in Broth. —Akiyama (1989: 157); Akiyama (2009). MNP.

Sphagnaceae

Sphagnum L.

S. cuspidatum Ehrh. in Hoffm. var. *cuspidatum* —Akiyama (1989: 151). SW.

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Spiridentaceae

Spiridens Nees

S. longifolius Lindb. —Akiyama (1988: 24, as *S. reinwardtii*); Akiyama (1989: 158, as *S. reinwardtii*). MNP.

S. reinwardtii Nees = misidentification of *S. longifolius*.

Splachnaceae

Tayloria Hook.

T. indica Mitt. —Akiyama (1986: 47, as *T. aff. longiseta*); Akiyama (1993: 220); Akiyama (2009). MNP.

T. aff. longiseta E.B. Bartram = misidentification of *T. indica*, fide Akiyama (1993: 220).

Symphyodontaceae

Chaetomitrium Dozy & Molk.

C. acanthocarpum Bosch & Sande Lac. —Akiyama (1986: 57); Akiyama (1997: 19). NS, SS.

C. elegans Geh. —Akiyama (1986: 57, as *C. cf. tahitense*); Akiyama (1997: 20). ES, NS, WS.

C. cf. longisetulum E.B. Bartram = misidentification of *C. subplicatum*, fide Akiyama (1997: 26) and Akiyama (1999: 259).

C. leptopoma (Schwägr.) Bosch & Sande Lac. = misidentification of *C. spinosum*, fide Akiyama (1997: 25).

C. orthorrhynchum (Dozy & Molk.) Bosch & Sande Lac. —Akiyama (1986: 57, as *C. cf. orthorrhynchum*); Akiyama (1997: 20). NS, SS, WS.

C. cf. orthorrhynchum (Dozy & Molk.) Bosch & Sande Lac. = misidentification of *C. orthorrhynchum*, fide Akiyama (1997: 20).

C. papillifolium Bosch & Sande Lac. —Akiyama (1986: 57); Akiyama (1997: 22). NS.

C. perlaeve Dixon —Akiyama (1997: 22). MNP.

C. cf. perlaeve Dixon = misidentification of *C. perlaeve*, fide Akiyama (1997: 22).

***C. seramensis** H. Akiyama —Akiyama (1997: 26, as *C. aff. spinosum*); Akiyama (1999: 258). SS.

Type: Central Seram, en route from Wae

Heka Heka to Wae Pasola Hatu, ca. 500 m alt., *Akiyama C-16011* (holotype in HYO, isotypes in BO, L).

C. spinosum E.B. Bartram —Akiyama (1986: 57, as *C. leptopoma*); Akiyama (1986: 57, as *C. cf. spinosum*); Akiyama (1997: 25, as *C. cf. spinosum*); Akiyama (1999: 259). MNP.

C. cf. spinosum E.B. Bartram = misidentification of *C. spinosum*, fide (Akiyama 1999: 259).

C. aff. spinosum E.B. Bartram = misidentification of *C. seramensis*, fide Akiyama (1999: 258).

C. subplicatum E.B. Bartram —Akiyama (1986: 57, as *C. cf. longisetulum*); Akiyama (1997: 26, as *C. aff. subplicatum*); Akiyama (1999: 259). NS.

C. aff. subplicatum E.B. Bartram = misidentification of *C. subplicatum*, fide Akiyama (1999: 259).

C. cf. tahitense (Sull.) Mitt. = misidentification of *C. elegans*, fide Akiyama (1997: 20).

C. torquescens Bosch & Sande Lac. —Akiyama (1997: 27). NS, SS.

C. vireseanum Bosch & Sande Lac. —Akiyama (1986: 57); Akiyama (1997: 20). CS, MNP, NS, SS.

Dimorphocladon Dixon

D. borneense Dixon —Akiyama (1993: 235, as *Aptychella* sp.); Akiyama (1997: 29); Akiyama (2009). CS, NS.

Thuidiaceae

Aequatoriella Touw

A. bifaria (Bosch & Sande Lac.) Touw —Akiyama (1986: 61, as *Pelekium bifarium*); Watanabe & Akiyama (1991: 65, as *Pelekium bifarium*); Touw (1993: 197, as *Thuidium hattorii*).

Claopodium (Lesq. & James) Renaud & Cardot

C. cf. assurgens (Sull. & Lesq.) Cardot = misidentification of *C. prionophyllum*, fide Watanabe & Akiyama (1991: 65).

C. prionophyllum (Müll. Hal.) Broth. —Akiyama (1986: 61, as *C. cf. assurgens*); Watanabe & Akiyama (1991: 65). MNP.

Indothuidium Touw

I. kiaense (R.S. Williams) Touw —Akiyama (1986: 62, as *Thuidium aff. kiaense*); Watanabe & Akiyama (1991: 62, as *Thuidium kiaense*).

Pelekium Mitt.

P. bifarium (Bosch & Sande Lac.) M. Fleisch. = *Aequatoriella bifaria*, fide Touw (2001b: 202).

P. bonianum (Besch.) Touw —Akiyama (1986: 62, as *T. meyenianum*); Watanabe & Akiyama (1991: 62, as *Thuidium bonianum*). WS.

P. gratum (P. Beauv.) Touw —Watanabe & Akiyama (1991: 63, as *Thuidium kuripanum*). ES, MNP, NS, SS, WS.

P. investe (Mitt.) Touw —Akiyama (1986: 62, as *Thuidium tamariscellum*); Watanabe & Akiyama (1991: 62, as *T. investe* and *T. tamariscellum*). MNP, SS.

P. velatum Mitt. —Akiyama (1986: 61); Watanabe & Akiyama (1991: 625). CS, NS, SS, WS.

P. synoicum (Touw) Touw —Touw (2001a: 117).

P. watanabei (Touw) Touw —Watanabe & Akiyama (1991: 62, as *Thuidium contortulum*); Touw (1993: 200, as *T. watanabei*); Touw (2001a: 87). MNP.

Thuidium Bruch & Schimp.

T. bonianum Besch. ≡ *Pelekium bonianum*, fide Touw (2001b: 203).

T. contortulum (Mitt.) A. Jaeger = misidentification of *Pelekium watanabei* (≡ *T. watanabei*; Thuidiaceae), fide Touw (1993: 202).

T. cymbifolium (Dozy & Molk.) Dozy & Molk. —Akiyama (1986: 61); Watanabe & Akiyama (1991: 62). MNP, NN, SS.

T. glaucinoides Broth. = *T. pristocalyx* var. *samoanum*, fide Touw (2001).

T. glaucinum (Mitt.) Bosch & Sande Lac. = *T. pristocalyx* var. *samoanum*, fide Touw (2001).

T. hattorii Touw = *Aequatoriella bifaria*, fide Touw (2001a: 63).

T. investe (Mitt.) A. Jaeger ≡ *Pelekium investe*, fide Touw (2001b: 203).

T. kuripanum (Dozy & Molk.) R. Watanabe = *Pelekium gratum*, fide Touw (2001a: 107).

T. kiaense R.S. Williams ≡ *Indothuidium kiaense*, fide Touw (2001a: 122 and his note-1 on p. 124).

T. aff. kiaense R.S. Williams = misidentification of *Indothuidium kiaense* (Thuidiaceae), fide Watanabe & Akiyama (1991: 63).

T. kuripanum (Dozy & Molk.) R. Watanabe = *Pelekium gratum*, fide Touw (2001a: 107)

T. meyenianum (Hampe) Dozy & Molk. = misidentification of *P. bonianum* (Thuidiaceae), fide Watanabe & Akiyama (1991: 62) and Touw (2001a: 113).

T. plumulosum (Dozy & Molk.) Dozy & Molk. —Akiyama (1986: 62); Watanabe & Akiyama (1991: 64).

T. pristocalyx (Müll. Hal.) A. Jaeger var. *pristocalyx* —Touw (2001a, fig. 8, without citation of specimens). unknown.

T. pristocalyx var. *samoanum* (Mitt.) Touw —Akiyama (1986: 62, as *T. glaucinoides* and *T. glaucinum*); Watanabe & Akiyama (1991: 64, as *T. samoanum*); Touw (2001b, fig. 10, without citation of specimens examined). CC, MNP, NS, WS

T. samoanum Mitt. ≡ *T. pristocalyx* var. *samoanum*, fide Touw (2001a: 41. See also his notes on p. 30).

T. tamariscellum (Müll. Hal.) Bosch & Sande Lac. = misidentification of *Pelekium investe* (Thuidiaceae), fide Touw (2001: 104).

T. watanabei Touw = *Pelekium watanabei*, fide Touw (2001b: 205).

Trachylomataceae

Trachyloma Brid.

T. indicum Mitt. —Akiyama (1896: 5); Akiyama 1990: 139. CC, MNP, SS, WS.

Trachypodaceae

Trachypus Reinw. & Hornsch.

T. bicolor Reinw. & Hornsch. —Akiyama (1986: 53, as *T. bicolor* and *Trachypus* sp.)

T. aff. appendiculatus (Renauld & Cardot) Broth. —Akiyama (1986: 53) reported on the basis of two specimens, but later Aki-

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yama (1997) did not listed this species from the Islands.

Trachypus sp. = misidentification of *T. bicolor*, fide Akiyama (1986: 53)

HEPATICAE

(Aneuraceae are not included.)

Adelanthaceae

Wettsteinia Schiffn.

W. inversa (Sande Lac.) Schiffn. —Kitagawa (1986: 67). MNP.

Aloniaceae

Sandeothallus R.M. Schust.

S. radiculosus (Schiffn.) R.M. Schust. —Kitagawa (1986: 71). MNP, SS.

Balantiopsaceae

Balantiopsis Mitt.

B. ciliaris S. Hatt. subsp. **novoguineensis** S. Hatt. —Kitagawa (1986: 70). MNP.

Calypogeiacae

Calypogeia Raddi

C. fusca (Lehm.) Steph. —Kitagawa (1986: 67). CS.

C. goebelii (Schiffn.) Steph. —Kitagawa (1986: 67). MNP.

Cephaloziaceae

Odontoschisma (Dumort.) Dumort.

Odontoschisma sp. —Kitagawa (1986: 67). MNP.

Frullaniaceae

Frullania Raddi

***F. akiyamae** S. Hatt. —Hattori (1986: 240). MNP.

Type: Central Seram, Tehoru, from Hatume to Holae Pass, 1430 m alt., *Akiyama* C-10675 (holotype in NICH, isotype in KYO).

F. apiculata (Reinw. et al.) Dumort. —Hattori (1986: 241). CS, MNP, SS,

F. armatifolia Verd. —Hattori (1986: 242). MNP.

F. attenuata Steph. —Hattori (1986: 242).

MNP.

***F. cordistipula** (Reinw. et al.) Dumort. var. **dentistipula** S. Hatt. —Hattori (1986: 242). MNP.

Type: Central Seram, Manusela National Park, Kanikeh, along a trail between Wae Angsela and Wae Huhu, 1480 m alt., *Akiyama* C-8761 (holotype in NICH, isotype in KYO).

F. ericoides (Nees) Mont. —Hattori (1986: 242). CS.

F. gaudichaudii (Nees & Mont.) Nees & Mont. —Hattori (1986: 242). MNP.

F. gracilis (Reinw. et al.) Dumort. var. **gracilis** —Hattori (1986: 242). ES, MNP.

***F. gracilis** var. **vittata** S. Hatt. —Hattori (1986: 243). MNP.

Type: North Seram, Sawai, Mt. Musisi, 1300 m alt., *Akiyama* C-9788 (holotype in NICH, isotype in KYO).

F. hasskarliana Lindenb. var. **hasskarliana** —Hattori (1986: 243). MNP.

***F. hasskarliana** var. **gracilis** S. Hatt. —Hattori (1986: 243). NS.

Type: Central Seram, trail between Hatume and Hoale Pass, 1400m alt., *Akiyama* C-10731 (holotype in NICH, isotype in KYO).

***F. hasskarliana** var. **parvidentata** S. Hatt. —Hattori (1986: 245). MNP.

Type: Central Seram, Manusela National Park, trail between Wae Angsela and Wae Huhu, 1000 m alt., *Akiyama* C-8800 (holotype in NICH, isotype in KYO).

F. heteromorpha Schiffn. —Hattori (1986: 245). NS.

F. junghuhniana Gottsche var. **junguhnniana** —Hattori (1986: 245). MNP.

F. junghuhniana var. **tenella** (Sande Lac.)

- Grolle & S. Hatt. —Hattori (1986: 245). MNP.
- F. multilacera** Steph. —Hattori (1986: 245). NS, WS.
- F. nobilis** Steph. var. **cochleata** (Steph.) S. Hatt. —Hattori (1986: 246). MNP.
- F. nodulosa** (Reinw. *et al.*) Nees —Hattori (1986: 246). NS, WS.
- F. orientalis** Sande Lac. —Hattori (1986: 246). CS.
- F. pauciramea** Steph. —Hattori (1986: 246). MNP.
- ***F. piptophylla** S. Hatt. var. **minor** S. Hatt. —Hattori (1986: 247). MNP.
Type: Central Seram, Manusela National Park, trail between Wae Huhu and G. O'Wae Puku, 2520 m alt., *Akiyama* C-8937 (holotype in NICH, isotype in KYO).
- F. pulogensis** Steph. —Hattori (1986: 247). MNP.
- F. ramuligera** (Nees.) Mont. —Hattori (1986: 247). MNP.
- F. reflexistipula** Sande Lac. —Hattori (1986: 247). MNP.
- F. repandistipula** Sande Lac. —Hattori (1986: 247). MNP.
- ***F. serrata** Gottsche var. **ceramensis** S. Hatt. —Hattori (1986: 247). MNP.
Type: Central Seram, Manusela National Park, Mt. Musisi near Sawai, *Akiyama* C-9788 (holotype in NICH, isotype in KYO).
- F. serrata** var. **hamatispina** (S. Hatt.) S. Hatt. —Hattori (1986: 248). MNP.
- F. serrata** fo. **crispulodentata** Verd. —Hattori (1986: 247). MNP.
- F. subcaduca** S. Hatt. —Hattori (1986: 248). MNP.
- F. sublignosa** Steph. —Hattori (1986: 248). ES, WS.
- F. subnigricaulis** S. Hatt. var. **subtruncata** S. Hatt. —Hattori (1986: 248). MNP.
- ***F. suocellata** S. Hatt. —Hattori (1986: 248). —Hattori (1986: 248). MNP.
Type: Central Seram, trail between Hatume and Hoale Pass, 1030 m alt., *Aki-*

yama C-10631 (holotype in NICH, isotype in KYO).

- F. ternatensis** Gottsche var. **non-appendiculata** S. Hatt. —Hattori (1986: 248). MNP.

Geocalycaceae

Conoscyphus Mitt.

- C. trapezioides** (Sande Lac.) Schiffn. —Kitagawa (1986: 68). MNP.

Heteroscyphus Schiffn.

- H. argutus** (Reinw. *et al.*) Schiffn. —Kitagawa (1986: 69). ES, NS, SS.

- H. aselliformis** (Reinw. *et al.*) Schiffn. —Kitagawa (1986: 69). MNP.

- H. coalitus** (Hook.) Schiffn. —Kitagawa (1986: 69). MNP.

- H. splendens** (Lehm. & Lindenb.) Grolle —Kitagawa (1986: 69). NS, MNP.

- H. zollingeri** (Gottsche) Schiffn. —Kitagawa (1986: 69). SS.

Lophocolea (Dumort.) Dumort.

- L. aff. ciliolata** (Nees) Gottsche —Kitagawa (1986: 69). NS, MNP.

- L. aff. erustiana** (Steph.) N. Kitag. —Kitagawa (1986: 69). MNP.

- L. giulianettii** Steph. —Kitagawa (1986: 69). SS.

- L. kurzii** Sande Lac. —Kitagawa (1986: 69). NS.

Saccognidium Grolle

- S. muricellum** (De Not.) Grolle —Kitagawa (1986: 69). MNP.

Herbaceae

Herbartus Gray

- H. armitanus** (Steph.) H.A. Mill. —Kitagawa (1986: 65); Juslén (2006: 415). MNP.

- H. javanicus** (Steph.) H.A. Mill. —Kitagawa (1986: 65). MNP.

- H. longifissus** Steph. —Kitagawa (1986: 65). MNP.

- H. longispinus** Jack & Steph. —Kitagawa (1986: 65). MNP.

Jungermanniaceae

Anastrophylloides (Spruce) Steph.

- A. bidens** (Nees) Steph. —Kitagawa (1986:

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- 68). MNP.
- A. revolutum** Steph. —Kitagawa (1986: 68). MNP.
- Anomacaulis** (R.M. Schust.) Grolle
- A. flaccidus** (Steph.) Grolle —Kitagawa (1986: 68). MNP.
- Chandonanthus** Mitt.
- C. hirtellus** (Web.) Mitt. —Kitagawa (1986: 68). MNP.
- Denotarisia** Grolle
- D. linguiifolia** (De Not.) Grolle —Kitagawa (1986: 68). MNP.
- Jamesoniella** (Spruce) Carrington
- J. contracta** (Reinw. *et al.*) N. Kitag. —Kitagawa (1986: 68). CS.
- J. flexicaulis** (Nees) Schiffn. —Kitagawa (1986: 68). MNP.
- Jungermannia** L.
- J. ariadne** Tayl. —Kitagawa (1986: 68). WS.
- J. tetragona** Lindenb. —Kitagawa (1986: 68). CS, SS.
- J. truncata** Nees —Kitagawa (1986: 68). A, E.
- Syzygiella** Spruce
- S. ovalifolia** Inoue —Kitagawa (1986: 68). MNP.
- S. securifolia** (Nees) Inoue —Kitagawa (1986: 68). MNP.
- Lejeuneaceae
- Acrolejeunea** (Spruce) Schiffn.
- A. pycnoclada** (Tayl.) Schiffn. —Mizutani (1986: 299). NS, SS.
- A. securifolia** (Endl.) Watts —Mizutani (1986: 299). MNP.
- Caudalejeunea** Steph.
- C. circinata** Steph. —Mizutani (1986: 299). CS, MNP, SS.
- C. reniloba** (Gottsche) Steph. —Mizutani (1986: 299). ES, MNP, NS, SS.
- Ceratolejeunea** (Spruce) Schiffn.
- C. belongeriana** (Gottsche) Steph. —Mizutani (1986: 299). CS, NS.
- C. moniliata** Herzog —Mizutani (1986: 299). CS, MNP, SS.
- Cheilolejeunea** (Spruce) Schiffn.
- C. ceylanica** (Gottsche) R.M. Schust. & Ka-
- chr. —Mizutani (1986: 300). MNP.
- C. imbricata** (Nees) S. Hatt. —Mizutani (1986: 300). CS, MNP, SS.
- C. intertexta** (Lindenb.) Steph. —Mizutani (1986: 300). NS.
- C. meyeniana** (Gottsche *et al.*) R.M. Schust. —Mizutani (1986: 300). MNP.
- C. occlusa** (Herzog) Kodama & N. Kitag. —Mizutani (1986: 300). MNP, SS.
- C. vittata** (Steph.) Steph. —Mizutani (1986: 300). CS, ES, MNP, NS, SS.
- Cololejeunea** (Spruce) Schiffn.
- C. crenulata** (Herzog) Benedix. —Mizutani (1986: 300). CS, MNP, SS.
- C. dozyana** (Sande Lac.) Schiffn. —Mizutani (1986: 300); Zhu & So (1998: 125). MNP.
- C. equalbi** Tixier —Mizutani (1986: 300). MNP, NS, SS, WS.
- C. falcatooides** Benedix. —Mizutani (1986: 300). CS, SS.
- C. floccosa** (Lehm. & Lindenb.) Schiffn. —Mizutani (1986: 300). ES, CS, NS, WS.
- C. goebelii** (Schiffn.) Schiffn. —Mizutani (1986: 301). CS, ES, MNP, NS, SS, SW.
- C. hasskarliana** (Lehm. & Lindenb.) Schiffn. —Mizutani (1986: 301). MNP.
- C. javanica** (Steph.) Mizut. —Mizutani (1986: 301). CS, MNP.
- C. lanciloba** Steph. —Mizutani (1986: 301). CS, MNP, NS, SS, WS.
- C. nymanii** (Steph.) Benedix —Mizutani (1986: 301). MNP, SS, WS.
- C. papillosa** (K.I. Goebel) Mizut. —Mizutani (1986: 301). CS, MNP.
- C. pecularis** (Herzog) Benedix —Mizutani (1986: 301). CS, MNP, SS.
- C. plagiophylla** Benedix —Mizutani (1986: 301). CS, NS.
- C. planissima** (Mitt.) Abyw. —Mizutani (1986: 301). CS, MNP.
- C. raduliloba** Steph. —Mizutani (1986: 301). SS.
- C. stephanii** Benedix —Mizutani (1986: 301). MNP.
- C. triapiculata** (Herzog) Tixier —Mizutani (1986: 301). MNP.
- C. yulensis** (Steph.) Benedix —Mizutani

(1986: 302). CS, MNP.

Colura (Dumort.) Dumort.

- C. acroloba** (Mont.) Jovet-Ast —Mizutani (1986: 302). MNP, WS.
- C. ari** (Steph.) Steph. —Mizutani (1986: 302). CS, MNP, NS.
- C. conica** (Sande Lac.) Grolle —Mizutani (1986: 302). CS, MNP.
- C. imperfecta** Steph. —Mizutani (1986: 302). MNP, SS.
- C. ornata** K.I. Goebel —Mizutani (1986: 302). SS.
- C. superba** (Mont.) Steph. —Mizutani (1986: 302). SS.

Diplasiolejeunea (Spruce) Schiffn.

- D. cavifolia** Steph. —Mizutani (1986: 302). CS.
- D. patelligera** Herzog —Mizutani (1986: 302). MNP.

Drepanolejeunea (Spruce) Schiffn.

- D. dactylophora** (Gottsche *et al.*) Schiffn. — Mizutani (1986: 302). CS, MNP.
- D. grandis** Herzog —Mizutani (1986: 302). MNP.
- D. intermedia** Zwickel —Mizutani (1986: 302). CS, MNP.
- D. levicornua** Steph. var. **levicornua** — Mizutani (1986: 303). NS, MNP, SS.
- D. levicornua** var. **longicornua** Herzog — Mizutani (1986: 303). MNP, NS.
- D. lyrata** Grolle —Mizutani (1986: 303). MNP.
- D. micholitzii** Steph. —Mizutani (1986: 303). CS, MNP.
- D. spinosocornuta** Steph. —Mizutani (1986: 303). MNP.
- D. tenera** K.I. Goebel —Mizutani (1986: 303). MNP, SS.
- D. ternatensis** (Gottsche) Steph. —Mizutani (1986: 303). CS, MNP, SS.

Hattoriolejeunea Mizut.

- ***H. akiyamae** Mizut. —Mizutani (1986: 303). MNP.

Type: Central Seram, Tehoru, Hatumete — Hoale Pass, 1160–1760 m alt., *Akiyama C-10650* (holotype in KYO, isotype NICH).

Lejeunea Lib.

- L. albescens** (Steph.) Mizut. —Mizutani (1986: 305). CS, MNP.
- L. catanduana** (Steph.) Mill. *et al.* —Mizutani (1986: 305). NS.
- L. cucullata** (Reinw. *et al.*) Nees —Mizutani (1986: 305). CS, MNP, NS.
- L. exilis** (Reinw. *et al.*) Grolle —Mizutani (1986: 305); Zhu & Grolle (2003: 102). CS, MNP, NS.
- L. fissistipula** (Steph.) Steph. —Mizutani (1986: 306). CS, MNP, NS.
- L. lumbricoides** (Nees) Nees —Mizutani (1986: 306). MNP.
- L. microloba** Tayl. —Mizutani (1986: 306). MNP.
- L. sordida** (Nees) Nees —Mizutani (1986: 306). ES, SS.

Lepidolejeunea R.M. Schust.

- L. bidentula** (Steph.) Steph. —Mizutani (1986: 306). NS.
- L. dentistipula** Steph. —Mizutani (1986: 306). NS.
- L. elliptica** (Lehm & Lindenb.) Schiffn. — Mizutani (1986: 306). ES, NS, WS.
- L. epiphylla** (Mitt.) Steph. —Mizutani (1986: 306). CS, NS, MNP, WS.
- L. foliicola** Steph. —Mizutani (1986: 306). MNP.
- L. maculata** (Mitt.) Steph. —Mizutani (1986: 306). MNP, NS, MNP, SS.

Lopholejeunea (Spruce) Schiffn.

- L. eulopha** (Tayl.) Schiffn. —Mizutani (1986: 306). SS.
- L. horticola** Schiffn. —Mizutani (1986: 306). ES, SS.
- L. javanica** (Nees) Schiffn. —Mizutani (1986: 306). ES, SS.
- L. nigricans** (Lindenb.) Schiffn. —Mizutani (1986: 307). NS.
- L. subfusca** (Nees) Schiffn. —Mizutani (1986: 307). CS, ES, MNP, NS, WS.

Mastigolejeunea (Spruce) Schiffn.

- M. humilis** (Gottsche) Schiffn. —Mizutani (1986: 307). ES, NS, WS.
- M. ligulata** (Lehm. & Lindenb.) Schiffn. — Mizutani (1986: 307). ES, NS.

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- M. truncata** Mizut. —Mizutani (1986: 307). NS.
- M. undulata** Gradst. & Grolle —Mizutani (1986: 307). MNP, NS, SS, WS.
- M. virens** (Aongstr.) Steph. —Mizutani (1986: 307). MPN, NS, WS.
- Metzgeriopsis** K.I. Goebel
- M. pusilla** K.I. Goebel —Mizutani (1986: 307). MNP.
- Otolejeunea** Grolle & Tixier
- O. semperiana** (Steph.) Grolle —Mizutani (1986: 307). NS.
- Ptychanthus** Nees
- P. striatus** (Lehm. & Lindenb.) Nees —Mizutani (1986: 307). WS.
- Rhaphidolejeunea** Herzog
- R. longicurvis** (Steph.) Herzog —Mizutani (1986: 307). CS, MNP.
- Schiffnerolejeunea** Verd.
- S. tumida** (Nees) Gradst. —Mizutani (1986: 308). WS.
- Spruceanthus** Verd.
- S. marianus** (Gottsche) Mizut. —Mizutani (1986: 308). NS.
- S. polymorphus** (Sande Lac.) Verd. —Mizutani (1986: 308). CS, MNP, NS, SS.
- Thysananthus** Lindenb.
- T. appendiculatus** Steph. —Mizutani (1986: 308). MNP, SS.
- T. convolutus** Lindenb. —Mizutani (1986: 308). CS, NS.
- T. fruticosus** (Lindenb. & Gottsche) Schiffn. —Mizutani (1986: 308). NS, SS.
- T. spatulistipus** (Reinw. et al.) Lindenb. —Mizutani (1986: 308). CS, NS, SS.
- Tuyamaella** S. Hatt.
- T. serratistipa** S. Hatt. —Mizutani (1986: 308). MNP.
- Lepicoleaceae
- Lepicolea** Dumort.
- L. rara** (Steph.) Grolle —Kitagawa (1986: 65). MNP.
- L. yakushimensis** (S. Hatt.) S. Hatt. —Kitagawa (1986: 65). MNP.
- Mastigophora** Nees
- M. diclados** (Brid.) Nees —Kitagawa (1986: 65). NS, CS, MNP, SS.
- Lepidoziaceae
- Acromastigum** A. Evans
- A. divaricatum** (Gottsche et al.) Evans —Kitagawa (1986: 65). MNP.
- Arachniopsis** Spruce
- A. major** Herzog —Kitagawa (1986: 65). NS.
- Bazzania** Gray
- B. australis** (Mont.) Trev. —Kitagawa (1986: 66). NS, SS.
- B. cadens** N. Kitag. —Kitagawa (1986: 66). NS.
- B. cincinnata** (De Not.) Trev. —Kitagawa (1986: 66). MNP.
- B. commutata** (Lindb. & Gottsche) Schiffn. —Kitagawa (1986: 66). MNP.
- B. conophylla** (Sande Lac.) Steph. —Kitagawa (1986: 66). NS.
- B. distans** (Nees) Trev. —Kitagawa (1986: 66). MNP.
- B. erosa** (Reinw. et al.) Trev. —Kitagawa (1986: 66). CS, MNP, NS.
- B. insignis** (De Not.) Trev. —Kitagawa (1986: 66). MNP.
- B. kernii** Steph. —Kitagawa (1986: 66). MNP.
- B. kokawana** N. Kitag. & Kodama —Kitagawa (1986: 66). MNP.
- B. longicaulis** (Sande Lac.) Schiffn. —Kitagawa (1986: 66). MNP.
- B. loricata** (Reinw. et al.) Trev. —Kitagawa (1986: 66). MNP.
- B. parvitexta** Steph. —Kitagawa (1986: 66). CS, MNP.
- B. pectinata** (Lindenb. & Gottsche) Schiffn. —Kitagawa (1986: 66). MNP.
- B. spiralis** (Reinw. et al.) Meijer —Kitagawa (1986: 66). MNP.
- B. tridens** (Reinw. et al.) Trev. —Kitagawa (1986: 66). NS, MNP.
- B. vittata** (Gottsche) Trev. —Kitagawa (1986: 66). MNP, SS.
- Kurzia** G. Martens
- K. geniculata** Mizut. —Kitagawa (1986: 66). CS.
- K. gonyotricha** (Sande Lac.) Grolle —Kitagawa (1986: 66). SS.

Lepidozia (Dumort.) Dumort.

L. borneensis Steph. —Kitagawa (1986: 66); Doe (1987b: 518). MNP.

L. brotheri Steph. —Doe (1987b: 520). MNP.

L. cladorhiza (Reinw. *et al.*) Nees —Kitagawa (1986: 67); Doe (1987b: 520). MNP.

L. ferdinandii-müelleri Steph. —Kitagawa (1986: 67); Doe (1987b: 521). MNP.

L. hasskarliana Steph. —Kitagawa (1986: 67); Doe (1987b: 521). MNP.

Note. Doe (1987: 528) noted that *Lepidozia ceramensis* Herzog (Herzog 1926: 340) might be conspecific to *L. hasskarliana* Steph.

***L. integrifolia** Doe —Doe (1987a: 421). MNP, WS.

Type: West Seram, Tihulale, en route from the upper elevation to the top of Gunung (Mt.) Totaniwel, ca. 1170 m alt., *Akiyama C-15811* (holotype in KYO, isotype in BO).

L. papulosa Steph. —Kitagawa (1986: 67); Doe (1987b: 522). CS, MNP, NS, SS, WS.

L. subintegra Lindenb. = misidentification of *L. subtrichodes*, *fide* Doe (1987: 525).

L. subtrichodes Steph. —Kitagawa (1986: 67) as *L. subintegra*; Doe (1987b: 523). MNP.

L. trichodes (Reinw. *et al.*) Nees —Kitagawa (1986: 67); Doe (1987b: 526). CS, MNP, SS, WS.

L. wallichiana Gottsche —Doe (1987b: 527). MNP, WS.

Psiloclada Mitt.

P. clandestina Mitt. —Kitagawa (1986: 67). CS.

Telaranea Spruce ex Schiffn.

T. kogiana (Setph.) Grolle —Kitagawa (1986: 67). NS.

T. neesii (Lindenb.) Fulford —Kitagawa (1986: 67). MNP.

T. trisetosa (Steph.) Grolle —Kitagawa (1986: 67). MNP.

Zoopsis (Hook.f. & Taylor) Gottsche *et al.*

Z. liukuensis Horik. —Kitagawa (1986: 67). MNP.

Z. setigera K.I. Goebel —Kitagawa (1986: 67). CS.

Metzgeriaceae

Metzgeria Raddi

M. foliicola Schiffn. —Kitagawa (1986: 71). MNP.

M. leptoneura Spruce —Kitagawa (1986: 71). CS, NS, SS.

Pallaviciniaceae

Podomitrium Mitt.

P. malaccense (Spruce) D. Campb. —Kitagawa (1986: 71). NS.

Plagiochilaceae

Plagiochila (Dumort.) Dumort.

***P. akiyamae** Inoue —Inoue (1986: 73). MNP. Type: Central Seram, Tehoru, along a trail between Hatumete and Holae Pass, 200–640 m alt., *Akiyama C-10532* (holotype in TNS, isotype in KYO).

P. arbuscula (Brid. ex Lehm. & Lindenb.) Lindenb. —Inoue (1986: 76). MNP.

P. bantamensis (Reinw. *et al.*) Dumort. —Inoue (1986: 76). CS.

***P. ceramica** Inoue —Inoue (1986: 76). MNP. Type: Manusela National Park, around the summit of G. O'Wae Puku, 2800–2900 m alt., *Akiyama C-8992* (holotype in TNS, isotype in KYO).

P. decidua Inoue & Grolle —Inoue (1986: 78). MNP.

P. dendroides (Nees) Lindenb. —Inoue (1986: 78). CS, MNP, NS.

P. frondescens (Nees) Lindenb. —Inoue (1986: 78). MNP.

P. gedeana Schiffn. —Inoue (1986: 78). MNP.

P. massalongoana Schiffn. —Inoue (1986: 79). NS, SS, WS.

P. novae-guineae Sande Lac. —Inoue (1986: 79). NS.

P. pseudaberrans Inoue & Grolle —Inoue (1986: 81). MNP.

P. renitens (Nees) Lindenb. —Inoue (1986: 81). MNP.

P. salacensis Gottsche —Inoue (1986: 81). ES, MNP.

P. sandei Dozy —Inoue (1986: 81). CS.

P. sciophila Nees in Lindenb. —Inoue (1986:

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83). MNP.

P. seemannii Mitt. —Inoue (1986: 83). CS, MNP, NS, SS.**P. teysmanii** Sande Lac. —Inoue (1986: 84). MNP, NS.**Plagiochilion** S. Hatt.**P. aff. fimbriatum** (Mitt.) Inoue —Kitagawa (1986: 69). CS.**P. oppositus** (Reinw. *et al.*) S. Hatt. —Kitagawa (1986: 69). MNP.

Pleuroziaceae

Pleurozia Dumort.**P. gigantea** (Web.) Lindb. —Kitagawa (1986: 70). MNP.

Pseudolepicoleaceae

Temnoma Mitt. & Hook.f.**T. setigerum** (Lindenb.) R.M. Schust. —Kitagawa (1986: 65). MNP.

Radulaceae

Radula Dumort.**R. anceps** Sande Lac. —Kitagawa (1986: 70). MNP, NS, SS.**R. campanigera** Mont. —Kitagawa (1986: 70). MNP.**R. densifolia** Castel —Kitagawa (1986: 70). CS.**R. javanica** Gottsche —Kitagawa (1986: 70). NS.**R. nymanii** Steph. —Kitagawa (1986: 70). MNP.**R. sumatrana** Steph. —Kitagawa (1986: 70).

CS.

R. tjibodensis K.I. Goebel —Kitagawa (1986: 70). MNP, NS, SS**R. vanzantenii** Yamada —Kitagawa (1986: 70). NS.**R. vrieseana** Sande Lac. —Kitagawa (1986: 70). ES, NS, WS.

Schgistochilaceae

Schistochila (Nees) Schiffn.**S. aligera** (Nees *et al.*) Jack & Steph. —Kitagawa (1986: 69). CS.**S. formosana** Horik. —Kitagawa (1986: 69). MNP.**S. philippinensis** (Mont.) Jack & Steph. —Kitagawa (1986: 69). CS, NS, MNP.**S. recurvata** Buch —Kitagawa (1986: 69). MNP.**S. sciurea** (Nees) Schiffn. —Kitagawa (1986: 69). MNP.**S. aff. schultzei** Steph. —Kitagawa (1986: 69). MNP.

Treubiaceae

Treubia K.I. Goebel**T. insignis** K.I. Goebel —Kitagawa (1986: 70). MNP.

Trichocoleaceae

Trichocolea Dumort.**T. breviseta** Steph. —Kitagawa (1986: 65). MNP.**T. pluma** (Reinw. *et al.*) Mont. —Kitagawa (1986: 65). MNP, NS, SS.

ANTHOCEROTAE

Anthocerotaceae

Dendroceros Mees**D. acutilobus** Steph. —Hasegawa (1986: 9). NS, MNP.**D. cavernosus** Haseg. —Hasegawa (1986: 10). CS, NS.**D. foliicola** Haseg. —Hasegawa (1986: 10). CS.**D. javanicus** (Nees) Nees in Gottsche —

Hasegawa (1986: 10). MNP.

***D. seramensis** Haseg. —Hasegawa (1986: 10). NS, SS.Type: Central Seram, Tehoru, between Wolu and Wae Waya, 0–360 m alt., *Akiyama C-10269* (KYO).**Folioceros** D.C. Bhardwaj**F. appendiculatus** (Steph.) Haseg. —Hasegawa (1986: 13). NS.

Megaceros Campb.

M. flagellaris (Mitt.) Steph. —Hasegawa (1986: 13). CS, MNP, SS.

Phaeoceros Prosk.

P. laevis (L.) Prosk. subsp. **carolinianus**

(Michaux) Prosk. —Hasegawa (1986: 13). ES, NS, WS.

P. polyandrus (Steph.) Haseg. —Hasegawa (1986: 13). A.

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